USPS-T-27

**BEFORE THE**
**POSTAL RATE COMMISSION**
**WASHINGTON, DC 20268-0001**

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| **POSTAL RATE AND FEE CHANGES, 1999** | **Docket No. R2000-1** |

# DIRECT TESTIMONY
# OF
# CHARLES L. CRUM
# ON BEHALF OF
# UNITED STATES POSTAL SERVICE

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## LISTING OF ATTACHMENTS

**Direct Testimony**

**of**

**Charles L. Crum**

## AUTOBIOGRAPHICAL SKETCH

My name is Charles L. Crum. I have worked for the Postal Service since 1995 as an Economist in the Special Studies office within Activity Based Management (formerly Product Cost Studies within Product Finance). I have observed postal operations in numerous Bulk Mail Centers (BMCs), Processing and Distribution Centers (P&DCs), delivery stations, and other facilities.

In Docket No. R97-1, I provided cost testimony supporting the new Parcel Post dropship discounts including DDU (Destination Delivery Unit), DSCF (Destination SCF), and OBMC (Origin BMC). In addition I produced updated analyses of DBMC Parcel Post cost savings and Bound Printed Matter Carrier-Route Presort cost savings. I also testified regarding the cost difference between Standard Mail (A) parcels and flats in support of the Standard Mail (A) parcel surcharge.

Prior to joining the Postal Service, I was employed by Westvaco Corporation between 1989 and 1995 in a series of increasingly responsible positions within both the Fine Papers and Envelope divisions. My assignments included duties in the areas of financial/cost/economic analysis, accounting, management, quality, systems, and administration at several plant locations throughout the United States. Most recently, I was Administrative Manager (Controller) at the Indianapolis Envelope Plant.

I earned a Bachelor of Science degree, cum laude, in Engineering Operations from North Carolina State University in 1985 and a Master's of Business Administration from the Fuqua School of Business at Duke University in 1989.

## I. PURPOSE OF TESTIMONY AND GUIDE TO RELATED DOCUMENTATION

The purpose of my testimony is to supply witness Moeller with cost data necessary to support the Standard Mail (A) destination entry discounts and the surcharge on Standard Mail (A) pieces that are neither letter- nor flat-shaped. My purpose is also to provide witness Kiefer with necessary cost data to support the proposed DDU (Destination Delivery Unit), DSCF (Destination SCF), and DBMC (Destination BMC) dropship discounts as well as the Carrier Route Presort discount for Bound Printed Matter. Finally, I provide to witness Taufique the cost data necessary to update the Periodicals dropship discounts for Regular and Nonprofit.

This testimony draws from USPS LR-I-109 and LR-I-175. Both library references were prepared by me or under my supervision and are closely associated with my testimony.

## II. STANDARD MAIL (A) DESTINATION ENTRY COST SAVINGS

### A. Background

Destination entry discounts in Standard Mail (A) were first introduced in Docket No. R90-1 based on cost testimony presented by witness Acheson. His analysis showed both Transportation and Nontransportation cost savings. Transportation savings included estimated avoided costs in Purchased Transportation (Cost Segment 14) and Postal Owned Vehicles (Cost Segment 8 - Vehicle Service Drivers). Nontransportation savings included the mail processing costs saved when container handlings are avoided at various intermediate facilities. My analysis follows the same basic format first proposed by witness Acheson and later revised and presented in both Docket No. MC95-1 and Docket No. R97-1.

B. Transportation Savings

In aggregate, my analysis of transportation costs uses the same equation first presented by witness Acheson in Docket No. R90-1. The equation says that the total cost per pound of transporting all Standard Mail (A) to the destination delivery unit is comprised of: (1) the cost of transporting the pounds entered at the destination SCF to the destination delivery unit times the proportion of pounds entered at the destination SCF plus (2) the cost of transporting the pounds entered at the destination BMC to the destination delivery unit times the proportion of pounds entered at the destination BMC plus (3) the cost of transporting the pounds plantloaded or entered at origin facilities to the destination delivery unit times that proportion.

Some of these transportation costs are incurred based on weight. Most are actually incurred in the Highway and Railroad segments where the cost driver is cubic feet and not weight. In those instances where cubic feet is the true cost driver, weight can generally be considered a good proxy because the majority of volume in bulk Standard Mail (A) consists of the same material (paper) and has a relatively similar density (pounds per cubic feet). I continue to express estimated cost savings on a per pound basis.

The starting point for this analysis is the entry profile listed in Attachment A, Table 1 which shows the estimated point of entry for Standard Mail (A) pounds in the Test Year. Table 1 is developed from Tables 4.1 through 4.3. These tables pull data from Library Reference LR-I-105 First-Class, Standard Mail (A), and Periodicals volumes by Shape and Weight Increment. Tables 2 and 3 of Attachment A remain basically unchanged from the analysis presented in Docket No. R97-1 and show the

estimated flowpaths for bulk Standard Mail (A). Attachment B, Table 1 shows estimated Test Year pounds on each flowpath and by type of transportation leg and Table 3 of Attachment B summarizes those results.

After getting the pounds by each transportation category, I then needed to find the costs by transportation category. These are developed in Tables 5 through 8 of Attachment B. Table 6 shows the Base Year transportation costs by account from the Base Year CRA presented in the testimony and workpapers of witness Meehan (USPS-T-11) and puts them into Test Year dollars based on the projection factors developed in Table 5. Table 7 adjusts these costs based on the proportion of Intra-SCF transportation costs that support the transportation network of Standard Mail (A) pieces and are not incurred in other types of activities (e.g. delivery). Adjusted Test Year costs are then allocated to the transportation categories of Intra-SCF, Intra-BMC, and Other as presented in Table 8. Finally, I make a mail mix adjustment based on the testimony of witness Daniel (USPS-T-28) to more accurately estimate Test Year transportation costs. Table 8 shows this adjustment.

We now have all the necessary data to solve our equation. Table 4 combines the Test Year pounds by transportation category developed in Table 3 with the Test Year costs developed in Table 8 to get costs per pound by transportation category. We know the proportion of mail entered at origin facilites, at destination BMCs, and at destination SCFs. The next step, then, is to solve the equation for the cost per pound of transporting origin entered mail to the destination delivery unit. Calculating DBMC, DSCF, and DDU cost savings becomes a matter of subtraction. Based on Test Year 2001 costs, the model shows potential transportation savings for DBMC entered

Standard Mail (A) as $0.0962/lb , the potential savings for DSCF entered mail as $0.1096/lb, and the potential savings for DDU entered mail as $0.1329/lb.

C. Non-Transportation Savings

Like transportation savings, nontransportation savings are estimated using the equation first presented in Docket No. R90-1 by witness Acheson. The equation says that the total cost per pound of crossdocking Standard Mail (A) through the postal system to the destination delivery unit is equal to (1) the cost per pound of crossdocking destination SCF entered mail to the destination delivery unit times the proportion of pounds entered at the destination SCF plus (2) the cost per pound of crossdocking destination BMC entered mail to the destination delivery unit times the proportion of pounds entered at the destination BMC plus (3) the cost per pound of crossdocking origin entered mail to the destination delivery unit times the proportion of pounds entered at origin facilities. The costs described here are actually incurred on a per container basis and consist of unloading containers at inbound docks, movement of containers through the facility to outbound docks, and loading of the containers to trucks at the outbound docks. While cubic volume of the pieces can limit the amount that can fit in or on a given container, weight also can be a good proxy, and is used here because of the relative similarity in density for the majority of Standard Mail (A) pieces.

Tables 1-4 of Attachment E develop the input percentages (how mail arrives at each facility) used in the crossdocking models in Attachment D. Basically this data provides the probability that a particular modeled activity will occur. The summary probabilities are shown in Column 1, Attachment D, Tables 1-15. In Tables 5-7,

Attachment E presents the productivities for the various modeled activities. In the Postal Service's proposal in Docket No. R97-1, mail processing productivities were adjusted by an explicit econometric volume variability factor that varied between about 50 and 100 percent. In this docket, the MTM productivities are adjusted only by an implicit volume variability or cost pool adjustment factor. This is consistent with the historical presentation of CRA cost data and results in effective volume variabilities at or near 100 percent. The impact of this change in approach is to raise Standard Mail (A) mail processing costs and cost savings over what they would be if explicit volume variability factors would have been considered for these types of operations as in Docket No. R97-1. The productivities are presented as MTM minutes per container in Column 2, Attachment D, Tables 1-15.

Attachment D presents models for each of the fifteen potential entry and crossdocking locations. The output of each model is the estimated cost per pound of moving containerized mail through the facility without sortation. These costs vary by both type of facility and whether the container is a sack, tray, or pallet. Once the cost of moving containerized mail through the system is known, the estimated mail processing savings of avoiding facilities can be estimated.

The outputs from the fifteen models presented in Attachment D are shown in Table 5 of Attachment C. To get a cost per facility (e.g. Originating SCF), the results by container in Table 5 must be weight-averaged together. Table 6 shows the proportion of weight in each type of container entered at the various facilities. Table 7 uses these proportions to develop an estimated average cost to crossdock bulk Standard Mail (A) through each of the listed facilities. Table 2 of Attachment C

presents a summary of the cost per pound to handle containerized mail at each of the facilities.

In Table 3 of Attachment C, the cost of crossdocking through each facility is combined with the amount of pounds on each of the thirteen flowpaths to estimate the total handling costs. Table 4 of Attachment C divides the total Test Year handling costs by the total Test Year pounds of bulk Standard Mail (A) to get the average Test Year handling costs per pound. We now have all the data necessary to solve our equation. The proportion of mail deposited at origin facilities, DBMCs, and DSCFs is known from Attachment A, Table 1. The cost of crossdocking mail at DBMCs and DSCFs is known from Attachment C, Table 7. Solving the equation gives us the cost per pound of crossdocking mail from origin-entered facilities to the destination delivery unit. This is the cost avoided by DDU dropship. Calculating DBMC and DSCF cost savings is, then, a matter of subtraction. Based on Test Year 2001 costs, the estimated non-transportation savings for DBMC entered Standard Mail (A) are $0.0182/lb , the savings for DSCF entered mail are $0.0300/lb, and the savings for DDU entered mail are $0.0399/lb.

D. Summary

To get the total cost savings of destination entered Standard Mail (A), one need simply add the transportation savings to the nontransportation savings. This gives the total estimated savings of depositing Standard Mail (A) pieces at various destination facilities. The savings are derived and presented on a per pound basis as summarized in the chart below.

Figure 1 - Standard Mail (A) Destination Entry Cost Savings

| Entry Point | Savings/Pound |
|---|---|
| Destination BMC | $0.114 |
| Destination SCF | $0.140 |
| Destination DDU | $0.173 |

## III. STANDARD MAIL (A) NONLETTER COST DIFFERENCES

### A. Background

In Docket No. R97-1, I presented an analysis of the cost difference between flats and parcels in Standard Mail (A) to support the Postal Service's 10 cent surcharge on parcels (residual shaped pieces not defined as letters or flats). That analysis was another step on the path towards more fully recognizing the impact of shape on costs in Standard Mail (A). My analysis in this case follows a very similar format as that presented in Docket No. R97-1.

While my current analysis is very similar to the one presented in Docket No. R97-1, two major changes have occurred which have opposing impacts on the cost results. First, as the surcharge was implemented, it was decided that those parcels which are under 1.25 inches in thickness could qualify for the flat automation rate if they met all the other criteria of the flat automation rate and were properly prepared. As implemented, then, the surcharge will not be applicable to some unknown subset of parcels. These parcels with thicknesses between .75 inches and 1.25 inches and being fully prepared as automated flats are the most similar to flats and will likely have

the most similar cost characteristics to flats. The logical conclusion, then, is that the pieces still subject to the surcharge will have a higher cost than those presented in this analysis and my estimate of the cost difference is conservative. It is also important to note that the definition of a parcel has not changed in the Postal data systems and that all the data from Base Year 1998 presented in this case precedes the implementation of the surcharge.

The second change from my presentation in Docket No. R97-1 is the calculation of mail processing costs. In Docket No. R97-1, the Postal Service proposed explicit econometric-based volume variability factors as part of their mail processing cost presentation. That was not done in this docket for effectively all of the parcel operations and some portion of the flats operations. The impact of this change is to expand the cost difference between flats and parcels beyond its level under the Docket No. R97-1 volume variability proposal.

B. Analysis and Presentation

My testimony uses the volumes and costs by shape presented in Attachment F to show the cost difference within Standard Mail (A) nonletters between parcels and flats. Volumes by shape (letter, flat, parcel) and rate category within Standard Mail (A) are presented in Tables 1 and 2 of Attachment F. They are derived from the Permit system and tied to official Revenue, Pieces, and Weight (RPW) totals. Costs are based on the In-Office Cost System (IOCS) and the Cost and Revenue Analysis (CRA) report and its workpapers. Additional analyses refine the Elemental Load section of City Carrier Street costs and the Rural Carrier cost allocation. Parcel density (pounds per cubic foot) is from a special study originally presented in PCR-38, Appendix C,

Docket No. MC97-2. I have chosen to use the average density for all Standard Mail (A) parcels from that study as opposed to separating the densities by subclass because I believe that represents the most reasonable estimate available for Standard Mail (A) parcels overall. I also use a new analysis of Window Service costs to develop those costs by shape.

Shape specific costs are estimated explicitly for seven cost components within the CRA: mail processing, window service, city delivery carriers (in-office and street), vehicle service drivers, rural delivery carriers, and transportation. The other cost segments are accounted for by the use of piggyback factors and a final control to CRA totals that allocates the remaining costs based on mail volume.

Total Base Year mail processing costs are developed by shape from the cost by segment analysis in the testimony of witness Smith (USPS-T-21). These costs include worksheet adjustments, premium pay adjustments, and piggyback factors. Window service costs by shape were developed from a new analysis presented in the testimony of witness Degen and taken from the testimony of witness Daniel. Please refer to USPS-T-16 and USPS-T-28.

City carrier in-office costs from the CRA (Cost Segment 6) are allocated based on the key shown at the bottom of Attachment F, Tables 3.1 through 3.4. That key is based on the LIOCATT System Summary for carrier costs presented in Report ALA860P13 in the workpapers of witness Meehan (USPS-T-11). City carrier street costs from CRA cost segment 7.1 (Route time) and 7.2 (Access time) are allocated based on mail volume. Cost segment 7.3 (Elemental Load) is allocated based on the key developed in the testimony of witness Daniel (USPS-T-28) and presented at the

bottom of Attachment F Tables 3.1 through 3.4. Cost segment 7.4 (Support) is distributed in proportion to the sum of the costs allocated in segments 6 to 7.3 above.

Vehicle Service Driver costs (cost segment 8) are allocated based on the cubic volume key. Likewise, Highway and Rail purchased transportation costs (cost segment 14) are allocated based on the cubic volume key. Domestic Air and Domestic Water purchased transportation costs are allocated based on the weight distribution key. Finally, rural delivery carrier costs (Cost segment 10) are allocated based on the distribution key developed in the testimony of witness Daniel (USPS-T-28) and presented at the bottom of Attachment F, Tables 3.1 through 3.4.

As in Docket No. R97-1, I combine the four subclasses of Standard Mail (A) for my presentation. Tables 3.1 through 3.6 of Attachment F show the data by subclass and by carrier route versus other. The following chart summarizes FY 1998 data from Table 3 of Attachment F.

Figure 2 - Base Year 1998 Bulk Standard Mail (A) Costs By Shape

| | Cost Per Piece (cents) |
|---|---|
| Parcels | 78.0 |
| Flats | 12.2 |
| Difference | 65.8 |

To find the Test Year 2001 cost difference per piece, I multiply the 65.8 cents described above by the test year/base year wage rate adjustment factor of 1.124. This

gives 74.0 cents as my estimate of the Test Year 2001 cost difference between parcels and flats in bulk Standard Mail (A).

The degree of presort and depth of dropshipment can each have an impact on costs. Standard Mail (A) flats are somewhat more finely presorted and deeply dropshipped than parcels. I have adjusted the parcel/flat cost difference to account for this. Table 4 of Attachment F shows my estimate that .4 cents of the 74.0 cent cost difference is due to the deeper entry of flats and 8.1 cents is due to the finer presort of flats. This leaves 65.5 cents per piece as my estimate of the FY 2001 shape-related cost difference between Standard Mail (A) parcels and flats.

This adjustment is extremely conservative because, in reality, parcels not only cost more than flats, but also save somewhat more than flats when they are dropshipped and presorted. If this difference was measured and presented in Table 4, the unit costs avoided by parcels would increase. Therefore, the 8.5 cent adjustment would decline and perhaps become an addition to, rather than a subtraction from, the stated cost difference.

C. SUMMARY

My testimony has identified cost differences between flats and parcels within Standard Mail (A). I have backed out the portion of the cost differences due to differing levels of dropship and presort. As previously stated, my purpose is to support witness Moeller's proposed surcharge of nonletter, nonflat-shaped mail. My costs and volumes cover the same full range (Regular, ECR, Nonprofit, and Nonprofit ECR) of pieces that witness Moeller's surcharge will impact. On the basis of my analysis I estimate the

adjusted Test Year 2001 cost difference between flats and parcels within bulk Standard Mail (A) nonletters to be 65.5 cents per piece.

## IV. BOUND PRINTED MATTER CARRIER ROUTE COST SAVINGS

### A. Background

In Docket No. R84-1 the Postal Service proposed a discount for bulk Bound Printed Matter presorted to individual carrier routes and box sections based on an analysis by witness Madison (USPS-T-16). I updated this analysis in Docket No. R97-1 based on a variety of new inputs. The current level of the discount is 7.7 cents.

### B. Mail Processing Savings

My analysis uses a similar format and much of the same basic data that I presented in Docket No. R97-1. I have updated the wage rate and piggyback factor, adjusted for the current volume variability assumptions, and revised the bundle sorting productivity based on a recent study presented in LR-I-88 (Flats' Bundle Study). See also USPS-T-25, Section 3. I assisted in the data collection portion of that study and believe it represents a clear improvement to the previous estimates used. Attachment G of my testimony fully describes and documents the analysis of carrier route cost savings.

### C. Summary

Based on my analysis, I estimate that the mail processing savings of Carrier Route Presorted Bound Printed Matter as compared to Basic Presorted Bound Printed Mattter is 7.7 cents per piece at Test Year 2001 cost levels.

## V. BOUND PRINTED MATTER DESTINATION ENTRY DISCOUNTS

### A. Introduction

Bound Printed Matter (BPM) is a Standard Mail (B) subclass comprised mostly of bulk-entered books, catalogs, and telephone directories. Books without enclosed advertising were officially allowed into the subclass after Docket No. R90-1. The subclass is zoned and has been separated into basic presorted and single piece categories since before postal reorganization. As discussed in the preceding section (IV), a carrier-route presort discount was added in February 1985.

Because of its zoned nature and local/non-local rates, Bound Printed Matter is already entered fairly deeply into the system. However, mail is often entered in ways that are inconsistent with current Postal operations. For example, some mail that is apparently entered deeply into the system and pays the Local rate can actually be more costly for the Postal Service to transport and process than less deeply entered mail. This can occur because the Local rate is no longer consistent with USPS mail processing or transportation networks and Local pieces can have higher costs than similar non-Local pieces. The Postal Service is, therefore, proposing the elimination of the Local rate in the testimony of witness Kiefer (USPS-T-37). Also, mail is sometimes entered at facilities geographically close to, but outside of the destinating service area of the piece. This mailer zone-skipping can require backhauling and rerouting on the part of the Postal Service which can result in increased costs for the subclass.

My testimony will provide the cost support for a new and improved rate structure for Bound Printed Matter. This new structure will allow mailers a variety of new options of where and how to enter their mail. The new structure should also lower USPS costs

by discouraging more expensive behavior and providing the proper incentives consistent with current Postal Service operations. Dropship discounts have proven to be popular and appropriate in Periodicals, Standard Mail (A), and Standard Mail (B) Parcel Post. My testimony will supply witness Kiefer the estimated zoned transportation costs for all Bound Printed Matter including destination BMC (DBMC), destination SCF (DSCF), and destination delivery unit (DDU) entered pieces as well as non-destination entered pieces. I am also providing witness Kiefer the per piece mail processing savings for DBMC entered pieces versus non-destination entered pieces as well as the DSCF and DDU entered mail processing savings relative to DBMC entered mail.

B. Mail Processing

When Bound Printed Matter is dropshipped to destinating facilities, it avoids the mail processing costs associated with loading, unloading, and crossdocking at origin facilities. Mail that is entered at the destination BMC avoids all mail processing at origin non-BMC facilities and handling at the origin BMC. A simple description of the Standard Mail (B) processing network is included with the entry profile in Attachment H. The entry profile in Attachment H references the Bound Printed Matter Mail Characteristics Study (LR-I-109). In the language of the Postal Service's cost systems, "outgoing" costs describe the costs at origin facilities. Attachment I presents the outgoing mail processing costs at non-BMC and BMC facilities and the total estimated costs per piece that DBMC BPM pieces will avoid. Being consistent with the Postal Service's volume variability assumptions in this case, I estimate that DBMC entered Bound Printed Matter will save $.380 relative to non-DBMC entered pieces at Test Year

2001 cost levels. If one were to assume explicit volume variability factors similar to those presented for these types of operations by the Postal Service in Docket No. R97-1, the estimated savings would be lower.

Bound Printed Matter pieces entered at the destinating SCF avoid all the mail processing activities at the destinating BMC. To estimate this savings, I use the basic principles included in the Standard Mail (B)/Parcel Post mail processing models introduced in Docket No. R97-1 and testified to by witness Eggleston in this case. Attachment J, Table 1 presents the model of DBMC entered Bound Printed Matter. Attachment J, Table 2 presents the model of DSCF entered Bound Printed Matter. To calculate the savings of DSCF entered BPM relative to DBMC entered BPM, I subtract the $.1265 costs for DSCF from the $.2761 costs for DBMC. The difference gives the Test Year 2001 estimated cost savings for DSCF entered BPM as $.1496 or 15.0 cents.

To calculate the costs avoided by destination delivery unit entered Bound Printed Matter, I merely take the total modeled DBMC costs. These are all avoided by DDU entered pieces because all of the modeled operations are avoided. I assume that mailers will be required to unload at the delivery unit so mailer entered DDU pieces will be at an equivalent point as DBMC entered pieces after they are unloaded. The Test Year 2001 estimated per piece cost savings for DDU entered mail relative to DBMC entered mail is, then, $.2761 or 27.6 cents.

C. Transportation

Bound Printed Matter that is dropshipped to destinating facilities avoids the legs of Postal transportation necessary to move them to those facilities if they are entered at origin facilities. In Attachment K, I develop transportation costs for DBMC entered

Bound Printed Matter from the "bottom up" in a matter somewhat similar to the approach testified to by witness Hatfield for Standard Mail (B) Parcel Post in Docket No. R97-1. Table 1 of Attachment K presents Base Year Cost Segment 14 Purchased Transportation costs divided into long distance, intermediate, and local costs. Long distance is further divided into zone and non-zone related costs. Table 2 adds in Cost Segment 8 Vehicle Service Driver (Postal Owned Vehicle) costs and then allocates the costs in Test Year terms to the four categories. Table 3 presents unadjusted DBMC and non-DBMC BPM transportation costs per pound by zone. Table 4 presents the rationale for determining the proportion of Cost Segment transportation costs actually incurred in transporting activities as opposed to other activities such as delivery (see also Attachment B, Table 7 and the discussion in part II, section B above). In addition, Table 4 shows the unadjusted DSCF transportation costs. Table 5 presents the distance relation factor used to allocate certain air costs to zone distance related versus non-zone distance related categories. Table 6 presents the final transportation costs results including the allocation of the residual transportation segment costs to Bound Printed Matter.

D. Summary

Bound Printed Matter has an outdated rate structure. The new dropship discounts that my cost testimony support will make Bound Printed Matter's structure more similar to that of other subclasses. It will provide new options for mailers and should improve operational efficiencies. My testimony presents mail processing and transportation cost savings supporting discounts for DDU, DSCF, and DBMC entered Bound Printed Matter and uses much of the basic dropship discount logic that has

proven successful in other subclasses. A summary of the transportation costs is presented in Table 6 of Attachment K and the Test Year 2001 mail processing cost savings estimates are summarized in the chart below.

Figure 3 - Bound Printed Matter Mail Processing Cost Savings ($/piece)

DBMC (relative to non-dropship) = $.380

DSCF (relative to DBMC) = $.150

DDU (relative to DBMC) = $.276

## VI. PERIODICALS DESTINATION ENTRY COST SAVINGS

### A. Background

In Docket No. R84-1, the Postal Service proposed a discount for second-class (now Periodicals) mail that is deposited at the destination SCF based on a cost analysis by witness Byrne. This analysis was revised in Docket No. R87-1 and was expanded to include a destination delivery unit entry discount in Docket No. R90-1 based on the testimony of witness Acheson. Witness Byrne presented an updated version of the analysis in Docket No. MC95-1 and witness Smith presented the analysis in Docket No. R97-1.

### B. Analysis & Presentation

The purpose of this analysis is to estimate the mail handling cost savings the Postal Service realizes when mailers deliver their Regular or Nonprofit Periodicals to a destination SCF or delivery unit, as opposed to entering the Periodicals at origin

facilities. When mailers enter their Periodicals at origin facilities or intermediate facilities, these Periodicals must undergo bulk transfer types of mail processing operations at the non-destination locations. By delivering Periodicals to a destination facility, customers save the Postal Service the cost of these bulk transfer operations. This testimony estimates those types of mail processing savings. The results of the cost analysis will serve as an input to witness Taufique who estimates transportation savings and recommends rates for Periodicals.

The savings presented in this testimony are relative to Zone 1/2 Periodicals mail processing costs. In past proceedings (Docket Nos. R87-1, MC95-1, MC96-2, and R97-1), the Postal Service has assumed that non-destination SCF zone 1 and 2 Periodicals will always incur one handling through a transfer hub before being dispatched to the destination SCF. Because most transfer hubs are BMCs, the costs of BMCs are assumed to proxy for the cost of transfer hubs in this analysis. Twenty percent of non-destination SCF zone 1 and 2 Periodicals have also been assumed to incur a trip through a non-destination SCF/ADC before being dispatched to the destination SCF. The same assumptions are used in this docket.

The types of bulk transfer handlings incurred at non-destination facilities include the unloading of Periodicals containers (pallets, sacks, and outside bundles) from trucks at inbound docks, movement of these types of containers through the facilities to outbound docks, and finally loading of the containers onto trucks at the outbound docks.

Attachment L (Periodicals Regular DSCF and DDU Mail Processing Cost Savings) and Attachment M (Periodicals Nonprofit DSCF and DDU Mail Processing

Cost Savings) use a series of calculations to estimate the costs avoided at SCFs and BMCs. All calculations occur for both Regular and Nonprofit Periodicals. First, pieces processed per hour are calculated by multiplying the productivity per container times the pieces per container. The productivities used in this analysis are adjusted only by implicit volume variability factors that are near 100 percent. This is done to be consistent with Postal Service assumptions in this docket and differs from the Postal Service presentation in Docket No. R97-1 where explicit volume variability factors ranging between about 50 and 100 percent were used. Next, total labor cost per hour is calculated by multiplying the wage rate by the piggyback factor times the premium pay factor. Using the two previous calculations, cost per piece by operation is calculated by dividing labor cost per hour by the number of pieces per hour.

The next goal is to develop the total weighted cost per piece by facility (BMC or SCF). The operations are divided by container type (pallet or sack) and sack operations are further subdivided into mechanized or manual. Each of these groups of operations are summed and then multiplied by the proportion of pieces estimated to go through those sets of operations. This gives a weighted average cost per piece by facility, which is presented in both Attachment L and Attachment M at the bottom of Tables 3 and 4 and also in the summary Table 5. Finally, costs per pound are calculated by multiplying the weighted cost per piece savings by pieces per pound using data found in the 1998 Revenue Pieces and Weight report (USPS-T-4 and USPS-T-5).

The above calculations provide the weighted cost estimates of handling Periodicals at SCFs and BMCs. The final step in the process is estimating the actual

cost savings of depositing pieces at destinating SCFs and delivery units. As previously discussed, this analysis assumes that all non-destination SCF zone 1 and 2 Periodicals will incur one handling through a transfer hub before being dispatched to a destination SCF while 20 percent will also incur an SCF cross-docking. Therefore, the estimated avoided costs for DSCF entered Periodicals are calculated as 100 percent of the BMC handling costs plus 20 percent of the SCF handling costs. The estimated avoided costs for DDU entered Periodicals are the DSCF costs avoided plus an additional 96.86 percent of the handling costs through an SCF. This is calculated by using the estimate that 96.86 percent of Periodicals travel from destinating BMCs to destinating delivery units via destinating SCFs while 3.14 percent travel directly from DBMCs to DDUs. DDU entered Periodicals do not avoid an SCF for the 3.14 percent of the time when there is direct transportation between the destinating BMC and destinating delivery unit.

C. Summary

Appendices L and M of this testimony show the inputs and equations used to calculate the cross-docking costs avoided by SCF rate and delivery unit rate Periodicals for both Regular and Nonprofit. The chart below summarizes the cost savings results, reflected in dollars per piece:

Figure 4 - Periodicals Destination Entry Cost Savings

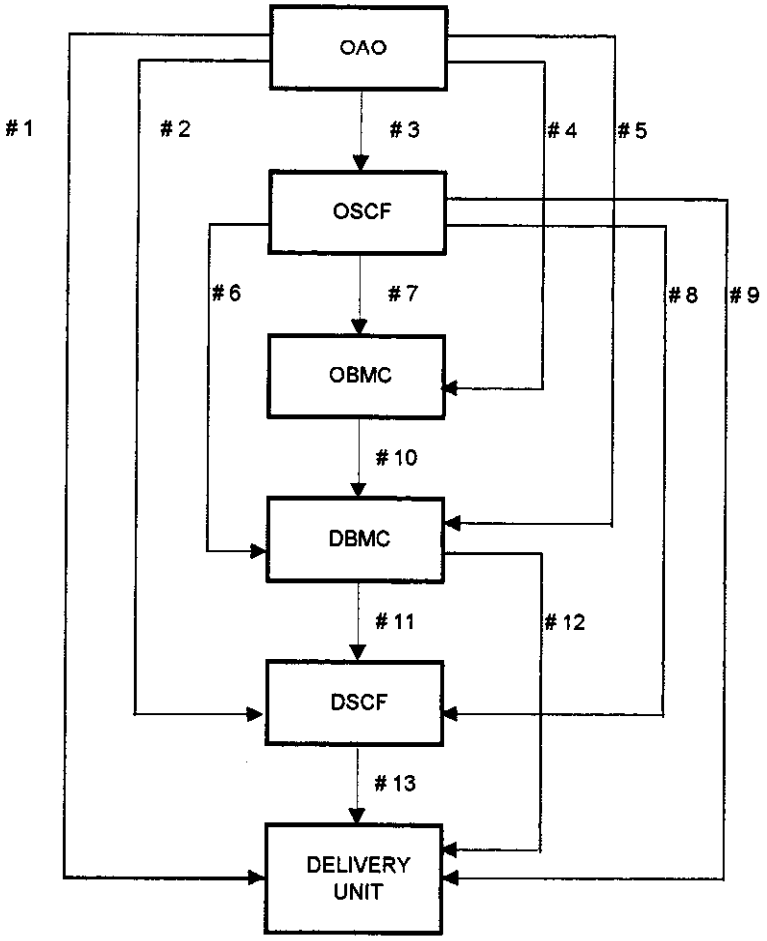
| Entry Point | Cost Savings ($/piece) |
|---|---|
| Periodicals Regular: | |
| Destination SCF | $0.0172 |
| Destination DDU | $0.0301 |
| Periodicals Nonprofit: | |
| Destination SCF | $0.0091 |
| Destination DDU | $0.0159 |

**Attachment A, Table 1**
**Entry Profile For Bulk Standard Mail (A) in Pounds**

| Point of Deposit | | Percent Dropshipped | Percent Plantloaded | Total |
|---|---|---|---|---|
| Originating AO | (OAO) | 3.19% | 0.46% | 3.65% |
| Originating SCF | (OSCF) | 8.83% | 0.55% | 9.38% |
| Originating BMC | (OBMC) | 2.02% | 11.91% | 13.93% |
| Destinating BMC | (DBMC) | 22.93% | 0.71% | 23.64% |
| Destinating SCF | (DSCF) | 37.05% | 0.48% | 37.53% |
| Destinating DU | (DDU) | 11.86% | 0.00% | 11.86% |
| **Totals** | | **85.88%** | **14.12%** | **100.00%** |

Source: Attachment F, Table 4.3

**Attachment A, Table 2**
**Flowpaths in Standard Mail (A) Postal Transportation System**




Source: Docket No. MC95-1, Exhibit USPS-T-9B

# Attachment A, Table 3
# Development of Mail Flow Proportions

## Flowpath Proportions

**OAO Originating Mail**

| | | | | |
|---|---|---|---|---|
| Percent Transported to BMC | 22.60% | | | 1/ |
| % to both OBMC and DBMC (keyed twice) | | 57.31% | | 2/ |
| % to DBMC only (keyed once) | | 42.69% | | 3/ |
| Percent Transported to SCF | 77.40% | | | 4/ |
| % Transported to OSCF | | 49.60% | | 5/ |
| % Transported to DSCF | | 50.40% | | 6/ |
| % Delivered Directly From DSCF | | | 3.14% | 7/ |
| % that Continues to Another Facility | | | 96.86% | 8/ |

**SCF and BMC Originating Mail**

| | | | | |
|---|---|---|---|---|
| Percent Transported to SCF | 76.11% | | | 9/ |
| % Transported to DSCF | | 42.69% | | 10/ |
| % Transported to DDU | | 57.31% | | 11/ |
| Percent Transported to BMC | 23.89% | | | 12/ |
| % Transported to OBMC | | 96.86% | | 13/ |
| % Transported to DBMC | | 3.14% | | 14/ |

| Flow Number | Origin of the Flow | Description of the Flow | % From Origin | 15/ |
|---|---|---|---|---|
| 1 | OAO | OAO - DDU | 1.22% | 16/ |
| 2 | OAO | OAO - DSCF | 37.78% | 17/ |
| 3 | OAO | OAO - OSCF | 38.39% | 18/ |
| 4 | OAO | OAO - OBMC | 12.95% | 19/ |
| 5 | OAO | OAO - DBMC | 9.65% | 20/ |
| | | | **100.00%** | 21/ |
| 6 | OSCF | OSCF - DBMC | 32.49% | 22/ |
| 7 | OSCF | OSCF - OBMC | 43.62% | 23/ |
| 8 | OSCF | OSCF - DSCF | 23.14% | 24/ |
| 9 | OSCF | OSCF - DDU | 0.75% | 25/ |
| | | | **100.00%** | 26/ |
| 10 | OBMC | OBMC - DBMC | **100.00%** | 27/ |
| 11 | DBMC | DBMC - DSCF | 96.86% | 28/ |
| 12 | DBMC | DBMC - DDU | 3.14% | 29/ |
| | | | **100.00%** | 30/ |
| 13 | DSCF | DSCF - DDU | **100.00%** | 31/ |

1/ - 15/ See Docket No. R97-1, LR-H-111.
16/ Equals Row 4/ * Row 6/ * Row 7/
17/ Equals Row 4/ * Row 6/ * Row 8/
18/ Equals Row 4/ * Row 5/
19/ Equals Row 1/ * Row 2/
20/ Equals Row 1/ * Row 3/
21/ Equals the sum of Rows 16/ through 20/. This figure equals 100%, accounting for all mail that originates at the OAO.
22/ Equals Row 9/ * Row 10/
23/ Equals Row 9/ * Row 11/
24/ Equals Row 12/ * Row 13/
25/ Equals Row 12/ * Row 14/
26/ Equals the sum of Rows 22/ through 25/. This figure equals 100%, accounting for all mail that originates at the OSCF.
27/ 100% of all mail that originates at an OBMC destinates at a DBMC.
28/ Equals Row 13/
29/ Equals Row 14/
30/ Equals the sum of Rows 28/ through 29/. This figure equals 100%, accounting for all mail that originates at the DBMC.
31/ 100% of all mail that originates at a DSCF destinates at a DDU.

## Attachment B, Table 1
## Total Test Year Pounds Transported on Each Mail Flow
(all figures are in thousands)

**Total Test Year Pounds** 11,413,614 1/

| [2] Flow Number | [3] Origin | [4] Percent of Volume Entered at Origin | [5] Pounds Entered at Origin | [6] Additional Pounds from Combining Flows | | [12] Pounds Processed | [13] Type of Transportation | [14] Proportion of Volume from the Origin | [15] Total Pounds Transported on Each Flow | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | OAO | 3.65% | 416,597 | 0 | 7/ | 416,597 | Intra-SCF | 1.23% | 5,124 | |
| 2 | OAO | 3.65% | 416,597 | 0 | 7/ | 416,597 | Intra-SCF | 37.78% | 157,390 | (a) |
| 3 | OAO | 3.65% | 416,597 | 0 | 7/ | 416,597 | Intra-SCF | 38.39% | 159,932 | (b) |
| 4 | OAO | 3.65% | 416,597 | 0 | 7/ | 416,597 | Intra-BMC | 12.95% | 53,949 | (c) |
| 5 | OAO | 3.65% | 416,597 | 0 | 7/ | 416,597 | Intra-BMC | 9.65% | 40,202 | (d) |
| 6 | OSCF | 9.38% | 1,070,597 | 159,932 | 8/ | 1,230,529 | Intra-BMC | 32.49% | 399,799 | (e) |
| 7 | OSCF | 9.38% | 1,070,597 | 159,932 | 8/ | 1,230,529 | Intra-BMC | 43.62% | 536,757 | (f) |
| 8 | OSCF | 9.38% | 1,070,597 | 159,932 | 8/ | 1,230,529 | Inter-SCF | 23.14% | 284,744 | (g) |
| 9 | OSCF | 9.38% | 1,070,597 | 159,932 | 8/ | 1,230,529 | Inter-SCF | 0.75% | 9,229 | |
| 10 | OBMC | 13.93% | 1,589,916 | 590,706 | 9/ | 2,180,622 | Inter-BMC | 100.00% | 2,180,622 | (h) |
| 11 | DBMC | 23.64% | 2,698,178 | 2,620,623 | 10/ | 5,318,801 | Intra-BMC | 96.86% | 5,151,790 | (i) |
| 12 | DBMC | 23.64% | 2,698,178 | 2,620,623 | 10/ | 5,318,801 | Intra-BMC | 3.14% | 167,010 | |
| 13 | DSCF | 37.53% | 4,283,529 | 5,593,925 | 11/ | 9,877,454 | Intra-SCF | 100.00% | 9,877,454 | |

Row 1/ From Table 2 of Attachment B.
Column [2] See Attachment A, Table 2.
Column [3] Origin of each flow. See Attachment A, Table 2 for a detailed description of each flow.
Column [4] See Attachment A, Table 1.
Column [5] Equals Column [4] * Row 1/.
Column [6] When flows merge, all pounds from previous flows must be accounted for. This column adds pounds from previous flows that merge into the current flow.
Row 7/ The OAO is the first point from which flows can originate. Therefore, no pounds are added from previous flows, because there are no previous flows.
Row 8/ In Flows 6 - 9, the OSCF-originating flows, the Total Pounds Transported on Flow 3 (Column 15, row (b)) must be added, since they flow into the OSCF.
Row 9/ In Flow 10, the OBMC-originating flow, the Total Pounds Transported on Flows 4 and 7 (Column 15, rows (c) and (f)) must be added, since they flow into the OBMC.
Row 10/ In Flows 11 and 12, the DBMC-originating flows, the Total Pounds Transported on Flows 5, 6, and 10 (Column 15, rows (d), (e), and (h)) must be added, since they flow into the DBMC.
Row 11/ In Flow 13, the DSCF-originating flow, the Total Pounds Transported on Flows 2, 8, and 11 (Column 15, rows (a), (g), and (i)) must be added, since they flow into the DSCF.
Column [12] Equals Column [5] + Column [6].
Column [13] See Docket No. MC95-1, USPS-T-9 Table 2, page 8.
Column [14] See Table 3 of Attachment A.
Column [15] Equals Column [12] * Column [14].

## Attachment B, Table 2
## Derivation of Average Transportation Cost per Pound

**Calculation of Test Year Transportation Costs**

**Transportation Costs**

| | | |
|---|---|---|
| Other | $294,341,389 | 1/ |
| Intra-BMC | $89,981,934 | 2/ |
| Intra-SCF | $237,375,714 | 3/ |
| Total | $621,699,037 | 4/ |

**Step 1: Calculation of Base Year Pieces per Pound**

| Base Year Pieces | | Base Year Pounds | | Base Year Pieces per Pound | |
|---|---|---|---|---|---|
| 82,357,865,000 | 5/ | 10,348,752,000 | 6/ | 7.958241245 | 7/ |

**Step 2: Calculation of Test Year Pounds**

| Test Year Pieces | | Base Year Pieces per Pound | | Total Test Year Pounds | |
|---|---|---|---|---|---|
| 90,832,291,000 | 8/ | 7.958241245 | 9/ | 11,413,613,662 | 10/ |

**Step 3: Calculation of Average Test Year Cost per Pound** $0.0545 11/

Row 1/ See Table 8 of this Attachment.
Row 2/ See Table 8 of this Attachment.
Row 3/ See Table 8 of this Attachment.
Row 4/ Total Test Year transportation costs equal Row 1/ plus Row 2/ plus Row 3/.
Row 5/ 1998 RPW (USPS-T-4&5)
Row 6/ 1998 RPW (USPS-T-4&5)
Row 7/ Base Year Pieces divided by Base Year Pounds (Row 5/ divided by Row 6/).
Row 8/ Exhibit USPS-T-6.
Row 9/ From Row 7/.
Row 10/ Test Year pieces divided by Base Year Pieces per Pound ( Row 8/ divided by Row 9/).
Row 11/ Total Test Year Transportation Costs divided by total Test Year Pounds (Row 4/ divided by Row 10/).

## Attachment B, Table 3
## Summary of Total Pounds in Each Transportation Category

**Total Pounds per Transportation Category**
(all figures are in thousands)

| Inter-Facility Transportation Category | Total Pounds in Each Category | |
|---|---|---|
| Intra-SCF | 10,199,900 | 1/ |
| Intra-BMC | 6,349,507 | 2/ |
| Other | 2,474,595 | 3/ |
| **Total** | **19,024,003** | 4/ |

Row 1/ See Table 1 of Attachment B. Flows 1-3 and Flow 13 constitute Intra-SCF Transportation.
Row 2/ See Table 1 of Attachment B. Flows 4-7 and Flows 11-12 constitute Intra-BMC Transportation.
Row 3/ See Table 1 of Attachment B. Flows 8 and 9 constitute Inter-SCF Transportation, and Flow 10 constitutes Inter-BMC Transportation
Row 4/ Equals the sum of Rows 1/ through 3/.

## Attachment B, Table 4
## Cost per Pound per Transportation Category

**Cost per Pound per Transportation Category**

| Inter-Facility Trans. Category | [1] Total pounds(000) | [2] Total costs(000) | [3] Cost/pound |
|---|---|---|---|
| Other | 2,474,595 | $294,341 | $0.1189 |
| Intra-BMC | 6,349,507 | $89,982 | $0.0142 |
| Intra-SCF | 10,199,900 | $237,376 | $0.0233 |

Column [1] See Table 3 of this Attachment.
Column [2] See Table 8 of this Attachment.
Column [3] Equals Column [2] divided by Column [1]

**Attachment B, Table 5**
**Projection of Base Year Purchased Transportation Costs into Test Year Costs**

| | [1] | [2] | [3] |
|---|---|---|---|
| Account | Base Year Costs(000) | Test Year Costs(000) | Projection Factor |
| Domestic Airmail | $22,788 | $27,484 | 1.2061 |
| Highway Service | $297,502 | $379,713 | 1.2763 |
| Railroad Service | $91,572 | $107,454 | 1.1734 |
| Domestic Water | $7,913 | $9,877 | 1.2482 |

Column [1] USPS-T-11 (WP.B).
Column [2] USPS-T-14 (WP H, Table D)
Column [3] Equals Column [2] divided by Column [1].

## Attachment B, Table 6
## Projection of Bulk Standard Mail (A) Base Year Transportation Costs into Test Year Costs

| Account | [1] Base Year Costs(000) | [2] Projection Factor | [3] Test Year Costs(000) |
|---|---|---|---|
| **Domestic Airmail** | | | |
| Passenger Air | $16,960 | 1.2061 | $20,455 |
| Intra-Alaska preferential | $2,657 | 1.2061 | $3,205 |
| Intra-Alaska non-preferential | $89 | 1.2061 | $107 |
| Intra-Hawaii | $1,168 | 1.2061 | $1,409 |
| Network | $563 | 1.2061 | $679 |
| Western air | $89 | 1.2061 | $107 |
| Air taxi | $1,263 | 1.2061 | $1,523 |
| | $22,789 | | |
| **Highway Service** | | | |
| Intra-SCF | $94,920 | 1.2763 | $121,150 |
| Intra-BMC | $63,705 | 1.2763 | $81,309 |
| Inter-SCF | $42,677 | 1.2763 | $54,470 |
| Inter-BMC | $79,112 | 1.2763 | $100,974 |
| Plant loaded | $11,924 | 1.2763 | $15,219 |
| Contract term van damage | $447 | 1.2763 | $571 |
| Area bus | $16 | 1.2763 | $20 |
| Empty equipment | $2,112 | 1.2763 | $2,696 |
| Alaskan highway service | $2,589 | 1.2763 | $3,304 |
| | $297,502 | | |
| **Railroad Service** | | | |
| Passenger rail | $2,883 | 1.1734 | $3,383 |
| Freight rail | $74,632 | 1.1734 | $87,576 |
| Plant loaded | $4,327 | 1.1734 | $5,077 |
| Damage and Empty equipment | $9,731 | 1.1734 | $11,419 |
| | $91,573 | | |
| **Domestic Water** | | | |
| Inland | $1,088 | 1.2482 | $1,358 |
| Offshore | $6,825 | 1.2482 | $8,519 |
| | $7,913 | | |
| **POV (Highway)** | TY Costs 5/ | PB Factor 4/ | |
| Postal-Owned Vehicle Costs (Comm) | $105,711 | 1.500 | $158,567 |
| Postal-Owned Vehicle Costs (NP) | $10,383 | 1.502 | $15,595 |

Column [1] USPS-T-11 (WP.B).
Column [2] See Table 5 of this Attachment.
Column [3] Equals Column [1] multiplied by Column [2].
Row 4/ From USPS-T-21, Attachment 11.
Row 5/ USPS-T-14 (WP H, Table D).

## Attachment B, Table 7
## Adjustments to Test Year Intra-SCF and POV Highway Transportation Costs

**Calculation of Revised Intra-SCF and Postal-Owned Vehicle Highway Costs**
(all figures are in thousands)

| | [1] | [2] | [3] |
|---|---|---|---|
| | Test Year Costs | Adjustment Factor | Adjusted Test Year Costs |
| Intra-SCF | $121,150 | 0.8357 | **$101,245** |
| POV | $174,162 | 0.8357 | **$145,547** |

Column [1] See Table 6 of this Attachment.
Column [2] Attachment K, Table 4.
Column [3] Column [1] multiplied by Column [2].

## Attachment B, Table 8
## Division of Standard Mail (A) Adjusted Test Year Transportation Costs into Account

(all figures are in thousands)

| | [1] Adjusted Test Year Costs | | [4] Intra-BMC | [5] Intra-SCF | [6] Other |
|---|---|---|---|---|---|
| **Domestic Airmail** | | | | | |
| Passenger Air | $20,455 | | | | $20,455 |
| Intra-Alaska preferential | $3,205 | | | | $3,205 |
| Intra-Alaska non-preferential | $107 | | | | $107 |
| Intra-Hawaii | $1,409 | | | | $1,409 |
| Network | $679 | | | | $679 |
| Western air | $107 | | | | $107 |
| Air taxi | $1,523 | | | | $1,523 |
| **Total Domestic Airmail** | $27,485 | | $0 | $0 | $27,485 |
| **Highway Service** | | | | | |
| Intra-SCF | $101,245 | 2/ | | $101,245 | |
| Intra-BMC | $81,309 | | $81,309 | | |
| Inter-SCF | $54,470 | | | | $54,470 |
| Inter-BMC | $100,974 | | | | $100,974 |
| Postal-Owned Vehicle Costs | $145,547 | 3/ | | $145,547 | |
| Plant loaded | $15,219 | | | | $15,219 |
| Alaskan Highway Service | $3,304 | | $3,304 | | |
| Contract terminal and van damage | $571 | | $131 | $164 | $276 |
| Empty equipment | $2,696 | | $640 | $766 | $1,290 |
| **Total Highway Service** | $505,335 | | $85,385 | $247,721 | $172,229 |
| | | | 23.02% | 28.66% | 48.32% |
| | | | 23.73% | 28.40% | 47.87% |
| **Railroad Service** | | | | | |
| Passenger rail | $3,383 | | | | $3,383 |
| Freight rail | $87,576 | | | | $87,576 |
| Plant loaded | $5,077 | | | | $5,077 |
| Damage and Empty equipment | $11,419 | | | | $11,419 |
| **Total Railroad Service** | $107,455 | | $0 | $0 | $107,455 |
| **Domestic Water** | | | | | |
| Offshore | $8,519 | | $8,519 | | |
| **Total Domestic Water** | $8,519 | | $8,519 | $0 | $0 |
| **Total - All Modes** | $648,794 | | $93,904 | $247,721 | $307,169 |
| [7] | $27,095 | | | | |
| | $621,699 | | $89,982 | $237,376 | $294,341 |
| | 95.8% | | | | |

Column [1] Unless otherwise annotated, these costs are from Table 6 of this Attachment, in the "Test Year Costs" column.
Row 2/ See Table 7 of this Attachment for adjustments.
Row 3/ Ibid.
Column [4] Costs from Column [1] that qualify as Intra-BMC transportation.
Column [5] Costs from Column [1] that qualify as Intra-SCF transportation.
Column [6] Costs from Column [1] that qualify as Inter-BMC or Inter-SCF transportation.
Row [7] USPS LR-I-97 (Transportation Summary Section)

## Attachment B, Table 9
## Results

**Transportation Equation:** $(Y^{origin} * X^{origin}) + (Y^{DBMC} * X^{DBMC}) + (Y^{DSCF} * X^{DSCF}) = Z^{T}$ 1/

$Y^{origin}$: Percentage of mail that is dropshipped to non-destination facilities or plantloaded to all facilities.
$X^{origin}$: Unit cost to the Postal Service of transporting $Y^{origin}$ to the destination delivery unit.

$Y^{DBMC}$: Percentage of mail that is dropshipped to a destination BMC.
$X^{DBMC}$: Unit cost to the Postal Service of transporting $Y^{DBMC}$ to the destination delivery unit.

$Y^{DSCF}$: Percentage of mail that is dropshipped to a destination SCF.
$X^{DSCF}$: Unit cost to the Postal Service of transporting $Y^{DSCF}$ to the destination delivery unit.

$Z^{T}$: Unit cost to the Postal Service of transporting all Standard Mail (A) to the destination delivery unit.

**Solving the Equation:**

| | | |
|---|---|---|
| $Y^{origin}$: | 28.16% | 2/ |
| $X^{origin}$: | Solve for this variable. | 3/ |
| $Y^{DBMC}$: | 22.93% | 4/ |
| $X^{DBMC}$: | $0.0367 | 5/ |
| $Y^{DSCF}$: | 37.05% | 6/ |
| $X^{DSCF}$: | $0.0233 | 7/ |
| $Z^{T}$: | $0.0545 | 8/ |
| $X^{origin}$: | **$0.1329** | 9/ |

**Cost Avoidances:**

| Point of Dropshipment | Cost Savings Per Pound | |
|---|---|---|
| DDU | $0.1329 | 10/ |
| DSCF | $0.1096 | 11/ |
| DBMC | $0.0962 | 12/ |

Row 1/ For a more detailed explanation of the transportation equation, see Docket No. MC95-1, USPS-T-9, page 3.
Row 2/ This figure is equal to the percentage of mail that is dropshipped to non-destination facilities, plus the percentage of mail that is plantloaded to all facilities. See Table 1 of Attachment A.
Row 3/ This variable is unknown. The equation will be solved to find $X^{origin}$.
Row 4/ Equals the percentage of mail that is dropshipped to all DBMCs. See Table 1 of Attachment A.
Row 5/ Equals cost per pound of the Intra-BMC leg, plus 96.86% of cost per pound of the Intra-SCF leg. See Table 8 of this Attachment. This is because 3.14% of mail is assumed to travel directly to the DDU from the DBMC. See Docket No. MC95-1, USPS-T-9, page 12.
Row 6/ Equals the percentage of mail that is dropshipped to all DSCFs. See Table 1 of Attachment A.
Row 7/ Equals cost per pound of the Inter-SCF leg. See Table 4 of this Attachment.
Row 8/ ZT is the unit cost to the Postal Service of transporting all Standard Mail (A) to the DDU. See Table 2 of this Attachment.
Row 9/ In solving the equation, $X^{origin}$ is equal to this figure.
Row 10/ Equals Row 9/.
Row 11/ Equals Row 9/ minus Row 7/. This is the cost avoidance for dropshipping to a DSCF.
Row 12/ Equals Row 9/ minus Row 5/. This is the cost avoidance for dropshipping to a DBMC.

Attachment C, Table 1

## Standard Mail (A) Aggregate Nontransportation Equation and Results

**Nontransportation Equation:** $(Y^{origin} * X^{origin}) + (Y^{DBMC} * X^{DBMC}) + (Y^{DSCF} * X^{DSCF}) = Z^{T}$ 1/

$Y^{origin}$: Percentage of mail that is dropshipped or plantloaded to non-destination facilities.
$X^{origin}$: Unit cost to the Postal Service of crossdocking $Y^{origin}$ before it reaches the destination delivery unit.

$Y^{DBMC}$: Percentage of mail that is dropshipped or plantloaded to a destination BMC.
$X^{DBMC}$: Unit cost to the Postal Service of crossdocking $Y^{DBMC}$ before it reaches the destination delivery unit.

$Y^{DSCF}$: Percentage of mail that is dropshipped or plantloaded to a destination SCF.
$X^{DSCF}$: Unit cost to the Postal Service of crossdocking $Y^{DSCF}$ before it reaches the destination delivery unit.

$Z^{T}$: Unit cost to the Postal Service of crossdocking all Standard Mail (A) before it reaches the destination delivery unit.

**Solving the Equation:**

| | | |
|---|---|---|
| $Y^{origin}$: | 26.96% | 2/ |
| $X^{origin}$: | Solve for this variable. | 3/ |
| $Y^{DBMC}$: | 23.64% | 4/ |
| $X^{DBMC}$: | $0.0217 | 5/ |
| $Y^{DSCF}$: | 37.53% | 6/ |
| $X^{DSCF}$: | $0.0099 | 7/ |
| $Z^{T}$: | $0.0196 | 8/ |

$X^{origin}$: **$0.0399** 9/

**Cost Avoidances:**

| Point of Dropshipment | Cost Savings Per Pound | |
|---|---|---|
| DDU | $0.0399 | 10/ |
| DSCF | $0.0300 | 11/ |
| DBMC | $0.0182 | 12/ |

1/ For a more detailed explanation of the nontransportation equation, see Docket No. MC95-1, USPS-T-9. (Originally in Docket No. R90-1, USPS-T-12.)
2/ This figure is equal to the percentage of mail that is dropshipped to non-destination facilities, plus the percentage of mail that is plantloaded to non-destination facilities. See Attachment A, Table 1.
3/ This variable is unknown. The equation will be solved to find $X^{origin}$.
4/ This figure is equal to the percentage of mail that is dropshipped or plantloaded at DBMCs. See Attachment A, Table 1.
5/ This figure is equal to Cost per Pound of crossdocking DBMC entered mail before it reaches the DDU. See Attachment C, Table 7.
6/ This figure is equal to the percentage of mail that is dropshipped or plantloaded at DSCFs. See Attachment A, Table 1.
7/ This figure is the crossdocking Cost per Pound of DSCF mail before it reaches the DDU. See Attachment C, Table 7.
8/ ZT is the unit cost to the Postal Service of handling all Standard Mail (A) at the DDU. See Attachment C, Table 4.
9/ In solving the equation, $X^{origin}$ is equal to this figure.
10/ Equals 9/.
11/ 9/ minus 7/ gives the estimated cost avoidance for dropshipping to a DSCF.
12/ 9/ minus 5/ gives the estimated cost avoidance for dropshipping to a DBMC.

**Attachment C, Table 2**
**Test Year Cost per Pound to Handle Containerized Mail at Various Facilities**

| Facility Type | Cost per Pound (cents)[1] |
|---|---|
| Origin AO, Station, or Branch | 0.08 |
| Origin SCF | 1.76 |
| Origin BMC | 1.81 |
| Destinating BMC | 1.21 |
| Destinating SCF | 0.99 |

1. Attachment C, Table 7.

**Attachment C, Table 3**
**Calculation of Total Handling Costs on all Flow Paths**

| Flow Number | Number of Pounds on Flowpath (000s)[1] | Facility Where Mail is Crossdocked | Cost of Crossdocking[2] | Total Handling Costs (000s)[3] |
|---|---|---|---|---|
| 1 | 5,124 | OAO | $0.0008 | $4 |
| 2 | 157,390 | OAO | $0.0008 | $123 |
| 3 | 159,932 | OAO | $0.0008 | $125 |
| 4 | 53,949 | OAO | $0.0008 | $42 |
| 5 | 40,202 | OAO | $0.0008 | $31 |
| 6 | 399,799 | OSCF | $0.0176 | $7,039 |
| 7 | 536,757 | OSCF | $0.0176 | $9,450 |
| 8 | 284,744 | OSCF | $0.0176 | $5,013 |
| 9 | 9,229 | OSCF | $0.0176 | $162 |
| 10 | 2,180,622 | OBMC | $0.0181 | $39,571 |
| 11 | 5,151,790 | DBMC | $0.0121 | $62,206 |
| 12 | 167,010 | DBMC | $0.0121 | $2,017 |
| 13 | 9,877,454 | DSCF | $0.0099 | $97,881 |
| TOTAL | | | | $223,663 |

1. Attachment B, Table 1.
2. Attachment C, Table 2 divided by 100.
3. Number of pounds per flowpath multiplied by the cost of crossdocking.

**Attachment C, Table 4**

**Calculation of Bulk Standard Mail (A) Nontransportation Unit Costs**

| | | |
|---|---|---|
| Total TY Pieces | 90,832,291,000 [1] | |
| Total BY Bulk Rate Pieces | 82,357,865,000 [2] | |
| Total BY Bulk Rate Pounds | 10,348,752,000 [3] | |
| BY Pieces per Pound | 7.958241 [4] | |
| Total TY Pounds | | 11,413,613,662 [5] |

Average Non-Transportation Cost Per Pound

| | |
|---|---|
| TY Handling Costs | $223,663,208 [6] |
| Total TY Pounds | 11,413,613,662 [5] |
| Average TY Cost Per Pound | 0.0196 [7] |

1. Test Year Pieces from Exhibit USPS-T-6.
2. Base Year Pieces from 1998 RPW (USPS-T-4&5).
3. Base Year Pounds from 1998 RPW (USPS-T-4&5).
4. Base Year Pieces (2) divided by Base Year Pounds (3).
5. Test Year Pieces (1) divided by Base Year Pieces per Pound (4).
6. Attachment C, Table 3.
7. Test Year Handling Costs (6) divided by Total Test Year Pounds (5).

**Attachment C, Tables 5-7**
**Calculation of Nontransportation Costs**
**By Container Type and By Facility**

For the purposes of this study, there are fifteen possible facility/container combinations for which costs need to be estimated. Attachment D of this document contains 15 mail flow models, one for each of the facility/container scenarios. The models show the operations needed to process a container from the point that it is unloaded at the incoming dock to the point that it is loaded onto an outgoing vehicle. A total time to process a particular container through a specific facility is arrived at by weight-averaging the time needed to perform each required operation on the basis of such factors as the source of the mail at the facility's unloading dock, the likelihood that a container will be sorted on a sack sorting machine, and the proportion of volume that will receive a direct runout onto a vehicle as opposed to a sort in a sawtooth operation prior to being loaded.
Because engineering standards were used to estimate the time needed for each operation, the following factors were multiplied by the weight-averaged time (and thus cost) per container/facility to align the result with postal costs as determined by the CRA: a P, F, & D factor of 1.15, a mail processing overhead factor, an appropriate piggyback factor, a BMC realization factor (.9713) for application to BMC costs only, and a BY 1998 clerk/mailhandler average hourly wage rate that is multiplied by a premium pay factor and divided by 60 (the minutes in an hour).
Finally, the resulting cost per container is divided by the average weight of that container to obtain an overall cost per pound for each container/facility combination. The following costs per pound were generated from Attachment D of this document:

**TABLE 5**

| | SACK | TRAY | PALLET |
|---|---|---|---|
| Originating AO | *$0.0002* | *$0.0015* | *$0.0020* |
| Originating SCF | *$0.0061* | *$0.0369* | *$0.0074* |
| Originating BMC | *$0.0140* | *$0.0326* | *$0.0092* |
| Destinating BMC | *$0.0181* | *$0.0286* | *$0.0077* |
| Destinating SCF | *$0.0192* | *$0.0605* | *$0.0055* |

The above costs must be weight-averaged in order to obtain an overall cost per facility. Table 6 below provides the requisite proportions for weighting the container costs for each facility type. The pound volumes shown in Table 6 were derived from Table 8 of this Attachment.

**TABLE 6**

| | SACK | TRAY | PALLET | TOTAL |
|---|---|---|---|---|
| Originating AO | 213,219<br>56.43% | 154,581<br>40.91% | 10,051<br>2.66% | 377,851 |
| Originating SCF | 419,556<br>43.23% | 354,205<br>36.50% | 196,660<br>20.27% | 970,421 |
| Originating BMC | 429,455<br>29.78% | 463,239<br>32.13% | 549,288<br>38.09% | 1,441,982 |
| Destinating BMC | 361,239<br>14.77% | 332,316<br>13.58% | 1,752,922<br>71.65% | 2,446,476 |
| Destinating SCF | 210,306<br>5.41% | 259,025<br>6.67% | 3,414,913<br>87.92% | 3,884,244 |

The results of weight-averaging, by facility, the costs per container shown in Table 5 by the appropriate proportions in Table 6 are shown below in column (a).

**TABLE 7**

| | (a) | | (b) |
|---|---|---|---|
| Originating AO | 0.000780 | or | 0.08 cents |
| Originating SCF | 0.017605 | or | 1.76 cents |
| Originating BMC | 0.018147 | or | 1.81 cents |
| Destinating BMC | 0.012075 | or | 1.21 cents |
| Destinating SCF | 0.009910 | or | 0.99 cents |

**Attachment C, Table 8**

**Breakout of Base Year Standard Mail (A) Pounds**
**By Container Type and By Facility**
(000)

| | PIECES | | | POUNDS | | |
|---|---|---|---|---|---|---|
| | SACK | TRAY | PALLET | SACK | TRAY | PALLET |
| ORIGINATING DU | 640,876 | 3,152,172 | 216,297 | 213,219 | 154,581 | 10,051 |
| ORIGINATNG SCF | 1,811,608 | 7,658,747 | 1,520,937 | 419,556 | 354,205 | 196,660 |
| ORIGINATING BMC | 2,424,735 | 7,535,054 | 5,225,669 | 429,455 | 463,239 | 549,288 |
| DESTINATING BMC | 1,895,754 | 3,672,653 | 13,936,479 | 361,239 | 332,316 | 1,752,922 |
| DESTINATING SCF | 1,133,089 | 5,159,237 | 19,617,382 | 210,306 | 259,025 | 3,414,913 |
| DESTINATING DU | 852,710 | 955,848 | 4,948,615 | 162,366 | 49,791 | 1,015,622 |
| TOTALS | 8,758,773 | 28,133,712 | 45,465,379 | 1,796,141 | 1,613,157 | 6,939,455 |

Source: Attachment C, Table 9

**Attachment C, Table 9**

## Mail Entry Profile
## Bulk Standard Mail (A)

Pieces (Thousands)

| Entry Type | Trays on Pallets | | Loose Trays | | Bundles or Sacks on Pallets | | Loose Sacks | | |
|---|---|---|---|---|---|---|---|---|---|
| | DS | PL | DS | PL | DS | PL | DS | PL | Total |
| ODU | 194,763 | - | 2,416,018 | 736,154 | 140 | 21,394 | 612,331 | 28,545 | 4,009,346 |
| OSCF | 376,554 | 58,228 | 7,298,032 | 360,715 | 1,029,492 | 56,663 | 1,692,105 | 119,503 | 10,991,292 |
| OBMC | 1,548,169 | 2,262,419 | 1,111,653 | 6,423,402 | 224,421 | 1,190,661 | 404,914 | 2,019,821 | 15,185,458 |
| DBMC | 7,387,966 | 238,874 | 3,371,385 | 301,268 | 6,226,808 | 82,831 | 1,803,293 | 92,461 | 19,504,887 |
| DSCF | 5,291,801 | 59,207 | 5,038,945 | 120,292 | 13,820,697 | 445,677 | 1,131,675 | 1,414 | 25,909,709 |
| DDU | 234,682 | - | 954,381 | 1,467 | 4,713,933 | - | 852,710 | - | 6,757,173 |
| | | | | | | | | | 82,357,865 |

Weight (Thousands)

| Entry Type | Trays on Pallets | | Loose Trays | | Bundles or Sacks on Pallets | | Loose Sacks | | |
|---|---|---|---|---|---|---|---|---|---|
| | DS | PL | DS | PL | DS | PL | DS | PL | Total |
| ODU | 8,078 | - | 111,005 | 43,576 | 20 | 1,953 | 210,711 | 2,508 | 377,851 |
| OSCF | 14,950 | 2,606 | 338,113 | 16,092 | 172,908 | 6,195 | 387,801 | 31,755 | 970,421 |
| OBMC | 70,504 | 101,247 | 37,964 | 425,276 | 45,204 | 332,333 | 55,781 | 373,673 | 1,441,982 |
| DBMC | 345,521 | 14,821 | 313,930 | 18,386 | 1,373,674 | 18,907 | 339,613 | 21,626 | 2,446,476 |
| DSCF | 251,977 | 2,690 | 257,041 | 1,984 | 3,115,354 | 44,892 | 210,147 | 159 | 3,884,244 |
| DDU | 3,769 | - | 49,710 | 81 | 1,011,854 | - | 162,366 | - | 1,227,780 |
| | | | | | | | | | 10,348,753 |

Source: Attachment F, Table 4.3

**Attachment D - Table 1**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Orig AO Sacks**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Sack | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| Mailer | Mailer unload sacks onto APC | 100.00% | 0.0000 | 0.0000 | 1.15 | 1.000 | 0.000 | 0.0000 |
| | Transport APC to van and load | 100.00% | 0.0113 | 0.0113 | 1.15 | 1.324 | 1.487 | 0.0256 |

| | | |
|---|---|---|
| MTM Minutes per Sack: | 0.0113 | |
| Total Minutes per Sack: | 0.0256 | |
| Pieces per Pound | 3.0057 | |
| Cost per Pound: | $ 0.0002 | min/sack*sack/pc*$/min*pc/lb |

1. Probability that the container receives the operation - Attachment E, Table 1.
2. MTM minutes per container - Attachment E, Table 5.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 2**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Orig SCF Sacks**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Sack | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| Mailer | Mailer unload sacks, move APC to staging | 77.54% | 0.0000 | 0.0000 | 1.15 | 0.000 | 0.000 | 0.0000 |
| | Move APC to dock | 77.54% | 0.0705 | 0.0547 | 1.15 | 1.542 | 1.651 | 0.1600 |
| | Load APC on van | 77.54% | 0.0173 | 0.0134 | 1.15 | 1.542 | 1.651 | 0.0393 |
| Service Area: | MHs unload APC to staging | 22.46% | 0.0159 | 0.0036 | 1.15 | 1.542 | 1.651 | 0.0105 |
| | Move APC to sort area | 22.46% | 0.0353 | 0.0079 | 1.15 | 1.542 | 1.651 | 0.0232 |
| | Sort sacks into rolling containers | 22.46% | 0.2661 | 0.0598 | 1.15 | 1.579 | 1.592 | 0.1728 |
| | Move APC to dock (stage) | 22.46% | 0.0353 | 0.0079 | 1.15 | 1.542 | 1.651 | 0.0232 |
| | Load APC on van | 22.46% | 0.0173 | 0.0039 | 1.15 | 1.542 | 1.651 | 0.0114 |

| | |
|---|---|
| MTM Minutes per Sack: | 0.1512 |
| Total Minutes per Sack: | 0.4403 |
| Pieces per Pound | 4.3179 |
| Cost per Pound: | $ 0.0061 |

1. Probability that the container receives the operation - Attachment E, Table 1.
2. MTM minutes per container - Attachment E, Table 5.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 3**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Orig BMC Sacks**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Sack | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| Mailer-Orig: | Mailer unload to conveyor (50% USPS assistance) | 8.67% | 0.1513 | 0.0131 | 1.15 | 1.444 | 1.744 | 0.0380 |
| Plantload: | USPS unload to conveyor | 54.83% | 0.1513 | 0.0830 | 1.15 | 1.444 | 1.744 | 0.2403 |
| Service Area: | USPS unload APC to staging | 36.50% | 0.0183 | 0.0067 | 1.15 | 1.444 | 1.744 | 0.0193 |
| | Move APC to SSM induction | 36.50% | 0.0373 | 0.0136 | 1.15 | 1.444 | 1.602 | 0.0362 |
| | Manually dump sack to SSM | 3.65% | 0.1719 | 0.0063 | 1.15 | 1.444 | 1.602 | 0.0167 |
| | Key sack at SSM | 100.00% | 0.0787 | 0.0787 | 1.15 | 1.438 | 1.935 | 0.2518 |
| | Direct runout to Postal Pak | 100.00% | 0.0000 | 0.0000 | 0.00 | 0.000 | 0.000 | 0.0000 |
| | Load Postal Pak onto van from staging | 100.00% | 0.0666 | 0.0666 | 1.15 | 1.444 | 1.744 | 0.1929 |
| | | | jen | | | | | |

| | |
|---|---|
| MTM Minutes per Sack: | 0.2680 |
| Total Minutes per Sack: | 0.7952 |
| Pieces per Pound | 5.6461 |
| Cost per Pound: | $ 0.0140 |

1. Probability that the container receives the operation - Attachment E, Table 1.
2. MTM minutes per container - Attachment E, Table 5.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 4**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Dest BMC Sacks**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Sack | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| Mailer-Dest: | Mailer unload to conveyor (50% USPS assistance) | 13.57% | 0.1513 | 0.0205 | 1.15 | 1.444 | 1.744 | 0.0595 |
| Plantload: | USPS unload to conveyor | 1.73% | 0.1513 | 0.0026 | 1.15 | 1.444 | 1.744 | 0.0076 |
| OBMC: | Unload Postal Pak to staging | 54.57% | 0.0719 | 0.0392 | 1.15 | 1.444 | 1.744 | 0.1137 |
| | Dump Postal Pak | 54.57% | 0.0094 | 0.0051 | 1.15 | 1.444 | 1.602 | 0.0137 |
| Service Area: | USPS unload APC to staging | 16.57% | 0.0183 | 0.0030 | 1.15 | 1.444 | 1.744 | 0.0088 |
| | Move APC to SSM induction | 16.57% | 0.0373 | 0.0062 | 1.15 | 1.444 | 1.602 | 0.0164 |
| | Manually dump sack to SSM | 1.66% | 0.1719 | 0.0028 | 1.15 | 1.444 | 1.602 | 0.0076 |
| | Key sack at SSM | 100.00% | 0.0787 | 0.0787 | 1.15 | 1.438 | 1.935 | 0.2518 |
| | Direct runout to van | 71.77% | 0.0000 | 0.0000 | 0.00 | 0.000 | 0.000 | 0.0000 |
| | Bedload sacks from conveyor | 71.77% | 0.1751 | 0.1257 | 1.15 | 1.444 | 1.744 | 0.3639 |
| | Direct runout to container | 1.75% | 0.0000 | 0.0000 | 0.00 | 0.000 | 0.000 | 0.0000 |
| | Sort at sawtooth to APCs | 26.48% | 0.3079 | 0.0815 | 1.15 | 1.444 | 1.602 | 0.2169 |
| | Move APC to dock staging | 28.23% | 0.0373 | 0.0105 | 1.15 | 1.444 | 1.602 | 0.0280 |
| | Load APC on van | 28.23% | 0.0183 | 0.0052 | 1.15 | 1.444 | 1.744 | 0.0150 |

| | |
|---|---|
| MTM Minutes per Sack: | 0.3368 |
| Total Minutes per Sack: | 1.1028 |
| Pieces per Pound | 5.2479 |
| Cost per Pound: | $ 0.0181 |

1. Probability that the container receives the operation - Attachment E, Table 1.
2. MTM minutes per container - Attachment E, Table 5.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 5**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Dest SCF Sacks**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Sack | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| Mailer: | Mailer unload APC to staging (50% USPS assistance) | 6.69% | 0.0159 | 0.0011 | 1.15 | 1.542 | 1.651 | 0.0031 |
| Service Area: | USPS unload APC to staging | 12.34% | 0.0159 | 0.0020 | 1.15 | 1.542 | 1.651 | 0.0057 |
| BMC (APC) & PL: | USPS unload APC to staging | 53.31% | 0.0173 | 0.0092 | 1.15 | 1.542 | 1.651 | 0.0270 |
| BMC (bedload): | Move APC on/off van | 20.97% | 0.0173 | 0.0036 | 1.15 | 1.542 | 1.651 | 0.0106 |
| | Load sacks on APC | 20.97% | 0.1055 | 0.0221 | 1.15 | 1.542 | 1.651 | 0.0648 |
| | Move APC to SSM induction | 11.13% | 0.0353 | 0.0039 | 1.15 | 1.542 | 1.651 | 0.0115 |
| | Manually induct sack into SSM | 11.13% | 0.1628 | 0.0181 | 1.15 | 1.542 | 1.528 | 0.0491 |
| | Key sack at SSM | 11.13% | 0.0917 | 0.0102 | 1.15 | 1.597 | 1.710 | 0.0321 |
| | Direct runout to container | 8.18% | 0.0000 | 0.0000 | 1.15 | 0.000 | 0.000 | 0.0000 |
| | Move APC to dock, staging | 8.18% | 0.0353 | 0.0029 | 1.15 | 1.542 | 1.651 | 0.0085 |
| | Load APC on van | 8.18% | 0.0159 | 0.0013 | 1.15 | 1.542 | 1.651 | 0.0038 |
| | Sort at sawtooth to APCs | 2.95% | 0.2973 | 0.0088 | 1.15 | 1.579 | 1.592 | 0.0253 |
| | Move APC to dock staging | 2.95% | 0.0353 | 0.0010 | 1.15 | 1.542 | 1.651 | 0.0030 |
| | Load APC on van | 2.95% | 0.0159 | 0.0005 | 1.15 | 1.542 | 1.651 | 0.0014 |
| | Move APC to NMO roller | 88.87% | 0.0353 | 0.0314 | 1.15 | 1.542 | 1.651 | 0.0918 |
| | Unload APC, sort sacks | 88.87% | 0.2661 | 0.2365 | 1.15 | 1.579 | 1.592 | 0.6836 |
| | Move APC to dock, staging | 88.87% | 0.0173 | 0.0154 | 1.15 | 1.542 | 1.651 | 0.0450 |
| | Load APC on van | 88.87% | 0.0159 | 0.0141 | 1.15 | 1.542 | 1.651 | 0.0414 |

| | |
|---|---|
| MTM Minutes per Sack: | 0.3821 |
| Total Minutes per Sack: | 1.1078 |
| Pieces per Pound | 5.3878 |
| Cost per Pound: | $ 0.0192 |

1. Probability that the container receives the operation - Attachment E, Table 1.
2. MTM minutes per container - Attachment E, Table 5.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 6**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Orig AO Trays**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Tray | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| Mailer: | Mailer load trays on APC | 100.00% | 0.0000 | 0.0000 | | 0.000 | 0.000 | 0.0000 |
| | Transport APC to van and Load | 100.00% | 0.0139 | 0.0139 | 1.15 | 1.324 | 1.487 | 0.0315 |

| | |
|---|---|
| MTM Minutes per Tray : | 0.0139 |
| Total Minutes per Tray: | 0.0315 |
| Pieces per Pound | 20.3918 |
| Cost per Pound: | $ 0.0015 |

1. Probability that the container receives the operation - Attachment E, Table 2.
2. MTM minutes per container - Attachment E, Table 6.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 7**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Orig SCF Trays**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Tray | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| Mailer | Mailer unload trays to APC to staging | 81.77% | 0.0000 | 0.0000 | 0.00 | 0.000 | 0.000 | 0.0000 |
| | Move APC to dock (stage) | 24.56% | 0.0874 | 0.0215 | 1.15 | 1.542 | 1.651 | 0.0628 |
| | Move APC to sort/band area | 57.21% | 0.0437 | 0.0250 | 1.15 | 1.542 | 1.651 | 0.0732 |
| | Band the trays | 57.21% | 0.1301 | 0.0744 | 1.15 | 1.444 | 1.580 | 0.1953 |
| | Move APC to dock (stage) | 57.21% | 0.0437 | 0.0250 | 1.15 | 1.542 | 1.651 | 0.0732 |
| | Load APC on van | 81.77% | 0.0214 | 0.0175 | 1.15 | 1.542 | 1.651 | 0.0512 |
| Service Area: | MHs unload APC to staging | 18.23% | 0.0196 | 0.0036 | 1.15 | 1.542 | 1.651 | 0.0105 |
| | Move APC to sort area | 18.23% | 0.0437 | 0.0080 | 1.15 | 1.542 | 1.651 | 0.0233 |
| | Sort trays into rolling containers | 18.23% | 0.2661 | 0.0485 | 1.15 | 1.542 | 1.651 | 0.1420 |
| | Band the trays | 12.76% | 0.1301 | 0.0166 | 1.15 | 1.444 | 1.580 | 0.0435 |
| | Move APC to dock (stage) | 18.23% | 0.0437 | 0.0080 | 1.15 | 1.542 | 1.651 | 0.0233 |
| | Load APC on van | 18.23% | 0.0214 | 0.0039 | 1.15 | 1.542 | 1.651 | 0.0114 |

| | |
|---|---|
| MTM Minutes per Tray : | 0.2519 |
| Total Minutes per Tray: | 0.7099 |
| Pieces per Pound | 21.6224 |
| Cost per Pound: | $ 0.0369 |

1. Probability that the container receives the operation - Attachment E, Table 2.
2. MTM minutes per container - Attachment E, Table 6.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 8**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Orig BMC Trays**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Tray | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| Mailer & Plantload: | USPS unload pallet | 69.76% | 0.0243 | 0.0170 | 1.15 | 1.444 | 1.744 | 0.0491 |
| | Move pallet to SSM induction | 55.10% | 0.0212 | 0.0117 | 1.15 | 1.444 | 1.602 | 0.0311 |
| | Manually dump tray to SSM | 27.55% | 0.1563 | 0.0431 | 1.15 | 1.444 | 1.602 | 0.1146 |
| | Key tray at SSM | 55.10% | 0.0787 | 0.0434 | 1.15 | 1.438 | 1.935 | 0.1388 |
| | Direct runout to Postal Pak | 55.10% | 0.0000 | 0.0000 | 1.15 | 0.000 | 0.000 | 0.0000 |
| | Load Postal Pak onto van from staging | 55.10% | 0.0888 | 0.0489 | 1.15 | 1.444 | 1.744 | 0.1417 |
| | Move pallet to NMO roller | 14.66% | 0.0139 | 0.0020 | 1.15 | 1.444 | 1.602 | 0.0054 |
| | Unload pallet, sort trays | 14.66% | 0.2756 | 0.0404 | 1.15 | 1.444 | 1.744 | 0.1170 |
| | Move pallet to dock | 14.66% | 0.0212 | 0.0031 | 1.15 | 1.444 | 1.602 | 0.0083 |
| | Load pallet on van | 14.66% | 0.0243 | 0.0036 | 1.15 | 1.444 | 1.744 | 0.0103 |
| Service Area: | USPS unload APC to staging | 30.24% | 0.0226 | 0.0068 | 1.15 | 1.444 | 1.744 | 0.0198 |
| | Move APC to SSM induction | 23.89% | 0.0462 | 0.0110 | 1.15 | 1.444 | 1.602 | 0.0294 |
| | Manually dump tray to SSM | 2.39% | 0.1336 | 0.0032 | 1.15 | 1.444 | 1.602 | 0.0085 |
| | Key tray at SSM | 23.89% | 0.0787 | 0.0188 | 1.15 | 1.438 | 1.935 | 0.0602 |
| | Direct runout to Postal Pak | 23.89% | 0.0000 | 0.0000 | 1.15 | 0.000 | 0.000 | 0.0000 |
| | Load Postal Pak onto van from staging | 23.89% | 0.0888 | 0.0212 | 1.15 | 1.444 | 1.744 | 0.0614 |
| | Move pallet to NMO roller | 6.35% | 0.0212 | 0.0013 | 1.15 | 1.444 | 1.602 | 0.0036 |
| | Unload pallet, sort trays | 6.35% | 0.2756 | 0.0175 | 1.15 | 1.444 | 1.744 | 0.0507 |
| | Move pallet to dock, staging | 6.35% | 0.0212 | 0.0013 | 1.15 | 1.444 | 1.602 | 0.0036 |
| | Load pallet on van | 6.35% | 0.0243 | 0.0015 | 1.15 | 1.444 | 1.744 | 0.0045 |

| | |
|---|---|
| MTM Minutes per Tray : | 0.2959 |
| Total Minutes per Tray: | 0.8578 |
| Pieces per Pound | 16.2660 |
| Cost per Pound: | $ 0.0326 |

1. Probability that the container receives the operation - Attachment E, Table 2.
2. MTM minutes per container - Attachment E, Table 6.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 9**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Dest BMC Trays**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Tray | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| OBMC Postal Pak: | Unload Postal Pak to staging | 29.03% | 0.0243 | 0.0071 | 1.15 | 1.444 | 1.744 | 0.0204 |
| | Dump trays to conveyor | 29.03% | 0.1001 | 0.0291 | 1.15 | 1.444 | 1.602 | 0.0773 |
| | Conveyor to SSM | 29.03% | 0.0000 | 0.0000 | 0.00 | 0.000 | 0.000 | 0.0000 |
| | Key trays at SSM | 29.03% | 0.0787 | 0.0228 | 1.15 | 1.438 | 1.935 | 0.0731 |
| | Direct runout to van | 20.83% | 0.0000 | 0.0000 | 0.00 | 0.000 | 0.000 | 0.0000 |
| | Bedload trays from conveyor | 20.83% | 0.1368 | 0.0285 | 1.15 | 1.444 | 1.744 | 0.0825 |
| | Direct runout to container | 0.51% | 0.0000 | 0.0000 | 0.00 | 0.000 | 0.000 | 0.0000 |
| | Sort at sawtooth to APCs | 7.69% | 0.2922 | 0.0225 | 1.15 | 1.579 | 1.602 | 0.0653 |
| | Move APC to dock staging | 8.19% | 0.0462 | 0.0038 | 1.15 | 1.444 | 1.602 | 0.0101 |
| | Load APC on van | 8.19% | 0.0226 | 0.0019 | 1.15 | 1.444 | 1.744 | 0.0054 |
| Mailer, PL, OBMC pallet: | USPS unload pallet | 25.94% | 0.0243 | 0.0063 | 1.15 | 1.444 | 1.744 | 0.0183 |
| | Move pallet to SSM induction | 20.49% | 0.0212 | 0.0043 | 1.15 | 1.444 | 1.602 | 0.0116 |
| | Manually dump tray to SSM | 10.25% | 0.1563 | 0.0160 | 1.15 | 1.444 | 1.602 | 0.0426 |
| | Key tray at SSM | 20.49% | 0.0787 | 0.0161 | 1.15 | 1.438 | 1.935 | 0.0516 |
| | Direct runout to van | 14.71% | 0.0000 | 0.0000 | 1.15 | 0.000 | 0.000 | 0.0000 |
| | Bedload trays from conveyor | 14.71% | 0.1368 | 0.0201 | 1.15 | 1.444 | 1.744 | 0.0583 |
| | Direct runout to container | 0.36% | 0.0000 | 0.0000 | 1.15 | 0.000 | 0.000 | 0.0000 |
| | Sort at sawtooth to APCs | 5.43% | 0.2922 | 0.0159 | 1.15 | 1.579 | 1.602 | 0.0461 |
| | Move APC to dock staging | 5.78% | 0.0462 | 0.0027 | 1.15 | 1.444 | 1.602 | 0.0071 |
| | Load APC on van | 5.78% | 0.0226 | 0.0013 | 1.15 | 1.444 | 1.744 | 0.0038 |
| | Move pallet to NMO roller | 5.45% | 0.0139 | 0.0008 | 1.15 | 1.444 | 1.602 | 0.0020 |
| | Unload pallet, sort trays | 5.45% | 0.2756 | 0.0150 | 1.15 | 1.579 | 1.602 | 0.0437 |
| | Move APC to dock | 5.45% | 0.0462 | 0.0025 | 1.15 | 1.444 | 1.602 | 0.0067 |
| | Load APC on van | 5.45% | 0.0226 | 0.0012 | 1.15 | 1.444 | 1.744 | 0.0036 |
| Service Area: | USPS unload APC to staging | 45.03% | 0.0226 | 0.0102 | 1.15 | 1.444 | 1.744 | 0.0295 |
| | Move APC to SSM induction | 35.57% | 0.0462 | 0.0164 | 1.15 | 1.444 | 1.602 | 0.0437 |
| | Manually dump tray to SSM | 3.56% | 0.1336 | 0.0048 | 1.15 | 1.444 | 1.602 | 0.0126 |
| | Key tray at SSM | 35.57% | 0.0787 | 0.0280 | 1.15 | 1.438 | 1.935 | 0.0896 |
| | Direct runout to van | 25.53% | 0.0000 | 0.0000 | 1.15 | 0.000 | 0.000 | 0.0000 |
| | Bedload trays from conveyor | 25.53% | 0.1368 | 0.0349 | 1.15 | 1.444 | 1.744 | 0.1011 |
| | Direct runout to container | 0.62% | 0.0000 | 0.0000 | 1.15 | 0.000 | 0.000 | 0.0000 |
| | Sort at sawtooth to APCs | 9.42% | 0.2922 | 0.0275 | 1.15 | 1.579 | 1.602 | 0.0801 |
| | Move APC to dock staging | 10.04% | 0.0462 | 0.0046 | 1.15 | 1.444 | 1.602 | 0.0123 |
| | Load APC on van | 10.04% | 0.0226 | 0.0023 | 1.15 | 1.444 | 1.744 | 0.0066 |
| | Move APC to NMO roller | 9.46% | 0.0462 | 0.0044 | 1.15 | 1.444 | 1.602 | 0.0116 |
| | Unload APC, sort trays | 9.46% | 0.2756 | 0.0261 | 1.15 | 1.579 | 1.602 | 0.0758 |
| | Move APC to dock, staging | 9.46% | 0.0462 | 0.0044 | 1.15 | 1.444 | 1.602 | 0.0116 |
| | Load APC on van | 9.46% | 0.0226 | 0.0021 | 1.15 | 1.444 | 1.744 | 0.0062 |

| | |
|---|---|
| MTM Minutes per Tray : | 0.3835 |
| Total Minutes per Tray: | 1.1102 |
| Pieces per Pound | 11.051696 |
| Cost per Pound: | $ 0.0286 |

1. Probability that the container receives the operation - Attachment E, Table 2.
2. MTM minutes per container - Attachment E, Table 6.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 10**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Dest SCF Trays**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Tray | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| Mailer: | Mailer unload APC to staging (50% USPS assistance) | 16.91% | 0.0196 | 0.0033 | 1.15 | 1.542 | 1.651 | 0.0097 |
| Service Area: | USPS unload APC to staging | 10.13% | 0.0196 | 0.0020 | 1.15 | 1.542 | 1.651 | 0.0058 |
| BMC(APC) & PL: | USPS unload APC to staging | 28.48% | 0.0214 | 0.0061 | 1.15 | 1.542 | 1.651 | 0.0178 |
| BMC (bedload): | Load/Unload APC on/off van to staging | 44.48% | 0.0214 | 0.0095 | 1.15 | 1.542 | 1.651 | 0.0279 |
| | Load trays on APC | 44.48% | 0.0918 | 0.0408 | 1.15 | 1.542 | 1.651 | 0.1195 |
| | Move APC to SSM induction | 4.93% | 0.0437 | 0.0022 | 1.15 | 1.542 | 1.651 | 0.0063 |
| | Manually dump sack to SSM | 4.93% | 0.1265 | 0.0062 | 1.15 | 1.597 | 1.710 | 0.0196 |
| | Key tray at SSM | 4.93% | 0.0917 | 0.0045 | 1.15 | 1.597 | 1.710 | 0.0142 |
| | Direct runout to container | 3.62% | 0.0000 | 0.0000 | 1.15 | 0.000 | 0.000 | 0.0000 |
| | Move APC to dock staging | 3.62% | 0.0437 | 0.0016 | 1.15 | 1.542 | 1.651 | 0.0046 |
| | Load APC on van | 3.62% | 0.0196 | 0.0007 | 1.15 | 1.542 | 1.651 | 0.0021 |
| | Sort at sawtooth to APCs | 1.31% | 0.2821 | 0.0037 | 1.15 | 1.579 | 1.580 | 0.0106 |
| | Move APC to dock staging | 1.31% | 0.0437 | 0.0006 | 1.15 | 1.542 | 1.651 | 0.0017 |
| | Load APC on van | 1.31% | 0.0196 | 0.0003 | 1.15 | 1.542 | 1.651 | 0.0007 |
| | Move APC to NMO roller | 95.07% | 0.0437 | 0.0415 | 1.15 | 1.542 | 1.651 | 0.1216 |
| | Unload APC, sort trays | 95.07% | 0.2661 | 0.2530 | 1.15 | 1.579 | 1.580 | 0.7258 |
| | Move APC to dock | 95.07% | 0.0437 | 0.0415 | 1.15 | 1.542 | 1.651 | 0.1216 |
| | Load APC on van | 95.07% | 0.0196 | 0.0186 | 1.15 | 1.542 | 1.651 | 0.0546 |

| | |
|---|---|
| MTM Minutes per Tray : | 0.4362 |
| Total Minutes per Tray: | 1.2642 |
| Pieces per Pound | 19.9179 |
| Cost per Pound: | $ 0.0605 |

1. Probability that the container receives the operation - Attachment E, Table 2.
2. MTM minutes per container - Attachment E, Table 6.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 11**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Orig AO Pallets**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Pallet | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| Mailer | Mailer Unload to staging | 100.00% | 0.0000 | 0.0000 | 0.00 | 0.000 | 0.000 | 0.0000 |
| | USPS load with pallet jack | 100.00% | 0.5893 | 0.5893 | 1.15 | 1.324 | 1.487 | 1.3342 |

| | |
|---|---|
| MTM Minutes per Pallet: | 0.5893 |
| Total Minutes per Pallet: | 1.3342 |
| Pieces per Pound | 19.1972 |
| Cost per Pound: | $ 0.0020 |

1. Probability that the container receives the operation - 100 percent palletized mail.
2. MTM minutes per container - Attachment E, Table 7.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 12**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Orig SCF Pallets**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Pallet | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| All: | Unload | 100.00% | 1.2434 | 1.2434 | 1.15 | 1.542 | 1.651 | 3.6403 |
| | Crossdock | 100.00% | 1.7655 | 1.7655 | 1.15 | 1.542 | 1.651 | 5.1689 |
| | Load | 100.00% | 1.1515 | 1.1515 | 1.15 | 1.542 | 1.651 | 3.3713 |

| | |
|---|---|
| MTM Minutes per Pallet: | 4.1604 |
| Total Minutes per Pallet: | 12.1805 |
| Pieces per Pound | 7.7339 |
| Cost per Pound: | $ 0.0074 |

1. Probability that the container receives the operation - 100 percent palletized mail.
2. MTM minutes per container - Attachment E, Table 7.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 13**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Orig BMC Pallets**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Pallet | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| All: | Unload | 100.00% | 1.3128 | 1.3128 | 1.15 | 1.444 | 1.744 | 3.8020 |
| | Crossdock | 100.00% | 1.8640 | 1.8640 | 1.15 | 1.444 | 1.744 | 5.3983 |
| | Load | 100.00% | 1.2158 | 1.2158 | 1.15 | 1.444 | 1.744 | 3.5211 |

| | |
|---|---|
| MTM Minutes per Pallet: | 4.3926 |
| Total Minutes per Pallet: | 12.7213 |
| Pieces per Pound | 9.5135 |
| Cost per Pound: | $ 0.0092 |

1. Probability that the container receives the operation - 100 percent palletized mail.
2. MTM minutes per container - Attachment E, Table 7.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 14**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Dest BMC Pallets**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Pallet | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| All: | Unload | 100.00% | 1.3128 | 1.3128 | 1.15 | 1.444 | 1.744 | 3.8020 |
| | Crossdock | 100.00% | 1.8640 | 1.8640 | 1.15 | 1.444 | 1.744 | 5.3983 |
| | Load | 100.00% | 1.2158 | 1.2158 | 1.15 | 1.444 | 1.744 | 3.5211 |

| | |
|---|---|
| MTM Minutes per Pallet: | 4.3926 |
| Total Minutes per Pallet: | 12.7213 |
| Pieces per Pound | 7.9504 |
| Cost per Pound: | $ 0.0077 |

1. Probability that the container receives the operation - 100 percent palletized mail.
2. MTM minutes per container - Attachment E, Table 7.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 15**
**MTM Productivity Mail Flow Models for Facility/Container Scenarios**

**Dest SCF Pallets**

| Source | Operation | (1) Probability | (2) MTM Minutes Per Pallet | (3) Col 1 * Col 2 | (4) P,F, and D | (5) MP Overhead | (6) Piggyback | (7) Col 3*Col 4* Col 5*Col 6 |
|---|---|---|---|---|---|---|---|---|
| All: | Unload | 100.00% | 1.2434 | 1.2434 | 1.15 | 1.542 | 1.651 | 3.6403 |
| | Crossdock | 100.00% | 1.7655 | 1.7655 | 1.15 | 1.542 | 1.651 | 5.1689 |
| | Load | 100.00% | 1.1515 | 1.1515 | 1.15 | 1.542 | 1.651 | 3.3713 |

| | | |
|---|---|---|
| MTM Minutes per Pallet: | 4.1604 | |
| Total Minutes per Pallet: | 12.1805 | |
| Pieces per Pound | 5.7446 | |
| Cost per Pound: | $ 0.0055 | |
| | | min/sack*sack/pc*$/min*pc/lb |

1. Probability that the container receives the operation - 100 percent palletized mail.
2. MTM minutes per container - Attachment E, Table 7.
3. Column 1 multiplied by Column 2.
4. Personal Needs, Fatigue and Delay Factor - Attachment D, Table 16
5. Mail Processing operation specific overhead factors - Attachment D, Table 16
6. Attachment D, Table 16

**Attachment D - Table 16**
**Input Sheet**

| | | |
|---|---|---|
| Personal Needs, Fatigue, and Delay (P, F, and D factor): | | 1.15 [1] |
| Overhead Factors: | SCF Platform | 1.542 [2] |
| | Manual Sack Sort | 1.579 [2] |
| | ACDCS Scanning | 1.444 [2] |
| | BMC Platform | 1.444 [2] |
| | Sack Sorting Machine BMC | 1.438 [2] |
| | Sack Sorting Machine SCF | 1.597 [2] |
| | Non-MODS | 1.324 [2] |
| Piggyback factors: | (3) | |

| Operation | NONMODS | BMC | MODS |
|---|---|---|---|
| Opening Units | | | 1.528 |
| Manual Sack Handling | | | 1.592 |
| Pouching | | | 1.58 |
| Platform | | 1.744 | 1.651 |
| Sack sorting machine | | 1.935 | 1.71 |
| BMC Other | | 1.602 | |
| Allied | 1.487 | | |

| | |
|---|---|
| TY 2001 Average Hourly Wage Rate for Clerks/Mailhandlers (Other Mail Processing) | $28.244 [4] |
| Premium Pay Factor | 0.961 [5] |
| BMC Realization Factor | 0.9713 [6] |
| Pieces per Sack | 141 [7] |
| Pieces per Tray | 188 [7] |
| Pieces per Pallet | 5763 [7] |

1. Personal Needs, Fatigue and Delay Factor (Docket No. MC96-2, USPS LR-PRR-7).
2. Mail Processing operation specific overhead factors for modeled costs (USPS LR-I-146, Part VII).
3. USPS-T-21, Attachment 14.
4. USPS LR-I-106 (Part VIII, Table VIII).
5. USPS-T-21, Attachment 15.
6. R94-1, Tr. 8/4006.
7. Docket No. R97-1, USPS LR-H-105 and LR-H-195.

**Attachment D - Table 17**

**Breakout of Base Year Standard Mail (A) Pounds**
**By Container Type and By Facility**
(000)

| | PIECES | | | POUNDS | | |
|---|---|---|---|---|---|---|
| | SACK | TRAY | PALLET | SACK | TRAY | PALLET |
| ORIGINATING DU | 640,876 | 3,152,172 | 216,297 | 213,219 | 154,581 | 10,051 |
| ORIGINATNG SCF | 1,811,608 | 7,658,747 | 1,520,937 | 419,556 | 354,205 | 196,660 |
| ORIGINATING BMC | 2,424,735 | 7,535,054 | 5,225,669 | 429,455 | 463,239 | 549,288 |
| DESTINATING BMC | 1,895,754 | 3,672,653 | 13,936,479 | 361,239 | 332,316 | 1,752,922 |
| DESTINATING SCF | 1,133,089 | 5,159,237 | 19,617,382 | 210,306 | 259,025 | 3,414,913 |
| DESTINATING DU | 852,710 | 955,848 | 4,948,615 | 162,366 | 49,791 | 1,015,622 |
| TOTALS | 8,758,773 | 28,133,712 | 45,465,379 | 1,796,141 | 1,613,157 | 6,939,455 |
| | | PIECES/POUND | | | OUNCES/PIECE | |
| ORIGINATING DU | 3.005716095 | 20.39176418 | 21.5205955 | 5.323190712 | 0.784630494 | 0.74347385 |
| ORIGINATNG SCF | 4.317915692 | 21.62235625 | 7.733851171 | 3.705491525 | 0.739974858 | 2.068826985 |
| ORIGINATING BMC | 5.646079014 | 16.26600339 | 9.513535635 | 2.833825025 | 0.983646666 | 1.681814271 |
| DESTINATING BMC | 5.247924067 | 11.05169557 | 7.950428483 | 3.048824601 | 1.447741651 | 2.01247015 |
| DESTINATING SCF | 5.387818454 | 19.9178779 | 5.744621756 | 2.969662051 | 0.803298428 | 2.785213837 |
| DESTINATING DU | 5.251765058 | 19.19724179 | 4.872494996 | 3.046594778 | 0.833453065 | 3.283738621 |

Source: Attachment C, Table 8

**Attachment E, Table 1**
**Computation of Input Percentages for Sack Models**

| Deposit Points | Dropshipped | | Plantloaded | | DS + PL | Pounds Dropshipped (1) | | Pounds Plantloaded (1) | | Total BY Pounds (000) |
|---|---|---|---|---|---|---|---|---|---|---|
| OAO | 0.1173 | + | 0.0014 | = | 0.1187 | 210,711 | + | 2,508 | = | 213,219 |
| OSCF | 0.2159 | + | 0.0177 | = | 0.2336 | 387,801 | + | 31,755 | = | 419,556 |
| OBMC | 0.0311 | + | 0.2080 | = | 0.2391 | 55,781 | + | 373,673 | = | 429,455 |
| DBMC | 0.1891 | + | 0.0120 | = | 0.2011 | 339,613 | + | 21,626 | = | 361,239 |
| DSCF | 0.1170 | + | 0.0001 | = | 0.1171 | 210,147 | + | 159 | = | 210,306 |
| DAO | 0.0904 | + | 0.0000 | = | 0.0904 | 162,366 | + | 0 | = | 162,366 |
| Totals | 0.7608 | | 0.2392 | | 1.0000 | 1,366,420 | | 429,721 | | 1,796,141 |

| Origin | BY Pounds | Total Pct | By Pounds | Dest | Flow | Type of Trans |
|---|---|---|---|---|---|---|
| OAO | 213,219 | 0.0123 | 2,623 | DAO | 1 | Intra-SCF |
| | | 0.3778 | 80,554 | DSCF | 2 | Intra-SCF |
| | | 0.3839 | 81,855 | OSCF | 3 | Intra-SCF |
| | | 0.1295 | 27,612 | OBMC | 4 | Intra-BMC |
| | | 0.0965 | 20,576 | DBMC | 5 | Intra-BMC |
| OSCF | 501,411 | 0.3249 | 162,908 | DBMC | 6 | Intra-BMC |
| | | 0.4362 | 218,715 | OBMC | 7 | Intra-BMC |
| | | 0.2314 | 116,027 | DSCF | 8 | Inter-SCF |
| | | 0.0075 | 3,761 | DAO | 9 | Inter-SCF |
| OBMC | 675,782 | 1.0000 | 675,782 | DBMC | 10 | Inter-BMC |
| DBMC | 1,220,505 | 0.9686 | 1,182,181 | DSCF | 11 | Intra-BMC |
| | | 0.0314 | 38,324 | DAO | 12 | Intra-BMC |
| DSCF | 1,392,487 | 1.0000 | 1,392,487 | DAO | 13 | Intra-SCF |
| | 196,581 | | 196,581 | DAO | 13 | Intra-SCF |
| DAO | 1,796,141 | | | | | |

| Deposit Points | Source | Pounds | Percentage |
|---|---|---|---|
| OSCF | Mailer | 387,801 | 77.34% |
| | Service Area/PL | 113,610 | 22.66% |
| | Total | 501,411 | 100.00% |
| OBMC | Mailer | 55,781 | 8.25% |
| | Plantload | 373,673 | 55.29% |
| | Service Area | 246,327 | 36.45% |
| | Total | 675,782 | 100.00% |
| DBMC | Mailer | 339,613 | 27.34% |
| | OBMC/PL | 675,782 | 54.41% |
| | Plantload | 21,626 | 1.74% |
| | Service Area | 205,110 | 16.51% |
| | Total | 1,242,131 | 100.00% |
| DSCF | Mailer | 210,147 | 13.22% |
| | Service Area | 196,581 | 12.37% |
| | DBMC/PL | 1,182,340 | 74.40% |
| | Total | 1,589,068 | 100.00% |

This table assigns BY pounds for each deposit point to the mail flow proportions (Attachment A, Table 3), in order to calculate the probabilities that deposited mail will receive an operation or handling.

(1) Attachment C, Table 9

**Attachment E, Table 2**
**Computation of Input Percentages for Tray Models**

| Deposit Points | Dropshipped | | Plantloaded | | DS + PL | Dropshipped(1) | | Plantloaded(1) | | Total BY Pounds (000) |
|---|---|---|---|---|---|---|---|---|---|---|
| OAO | 0.0688 | + | 0.0270 | = | 0.0958 | 111,005 | + | 43,576 | = | 154,581 |
| OSCF | 0.2096 | + | 0.0100 | = | 0.2196 | 338,113 | + | 16,092 | = | 354,205 |
| OBMC | 0.0235 | + | 0.2636 | = | 0.2872 | 37,964 | + | 425,276 | = | 463,239 |
| DBMC | 0.1946 | + | 0.0114 | = | 0.2060 | 313,930 | + | 18,386 | = | 332,316 |
| DSCF | 0.1593 | + | 0.0012 | = | 0.1606 | 257,041 | + | 1,984 | = | 259,025 |
| DAO | 0.0308 | + | 0.0001 | = | 0.0309 | 49,710 | + | 81 | = | 49,791 |
| Totals | 0.6867 | | 0.3133 | | 1.0000 | 1,107,763 | | 505,394 | | 1,613,157 |

| Origin | BY Pounds | Total Pct | By Pounds | Dest | Flow | Type of Trans |
|---|---|---|---|---|---|---|
| OAO | 154,581 | 0.0123 | 1,901 | DAO | 1 | Intra-SCF |
| | | 0.3778 | 58,401 | DSCF | 2 | Intra-SCF |
| | | 0.3839 | 59,344 | OSCF | 3 | Intra-SCF |
| | | 0.1295 | 20,018 | OBMC | 4 | Intra-BMC |
| | | 0.0965 | 14,917 | DBMC | 5 | Intra-BMC |
| OSCF | 413,549 | 0.3249 | 134,362 | DBMC | 6 | Intra-BMC |
| | | 0.4362 | 180,390 | OBMC | 7 | Intra-BMC |
| | | 0.2314 | 95,695 | DSCF | 8 | Inter-SCF |
| | | 0.0075 | 3,102 | DAO | 9 | Inter-SCF |
| OBMC | 663,648 | 1.0000 | 663,648 | DBMC | 10 | Inter-BMC |
| DBMC | 1,145,242 | 0.9686 | 1,109,282 | DSCF | 11 | Intra-BMC |
| | | 0.0314 | 35,961 | DAO | 12 | Intra-BMC |
| DSCF | 1,368,307 | 1.0000 | 1,368,307 | DAO | 13 | Intra-SCF |
| | 154,096 | | 154,096 | DAO | 13 | Intra-SCF |
| DAO | 1,613,157 | | | | | |

| Deposit Points | Source | Volume | Percentage |
|---|---|---|---|
| OSCF | Mailer | 338,113 | 81.76% |
| | Service Area/PL | 75,435 | 18.24% |
| | Total | 413,549 | 100.00% |
| OBMC | Mailer/PL | 463,239 | 69.80% |
| | Service Area | 200,408 | 30.20% |
| | Total | 663,648 | 100.00% |
| DBMC | Mailer | 313,930 | 17.35% |
| | Service Area | 812,926 | 44.94% |
| | OBMC | 663,648 | 36.69% |
| | PL | 18,386 | 1.02% |
| | Total | 1,808,890 | 100.00% |
| DSCF | Mailer | 257,041 | 16.88% |
| | Service Area | 154,096 | 10.12% |
| | Plantload | 1,984 | 0.13% |
| | DBMC | 1,109,282 | 72.86% |
| | Total | 1,522,403 | 100.00% |

This table assigns BY pounds for each deposit point to the mail flow proportions (Attachment A, Table 3), in order to calculate the probabilities that deposited mail will receive an operation or handling.

**Attachment E, Table 3**
**Computation of Input Percentages for Pallet Models**

| Deposit Points | Dropshipped | | Plantloaded | | DS + PL | Dropshipped(1) | | Plantloaded(1) | | Total BY Pounds (000) |
|---|---|---|---|---|---|---|---|---|---|---|
| OAO | 0.0012 | + | 0.0003 | = | 0.0014 | 8,097 | + | 1,953 | = | 10,051 |
| OSCF | 0.0271 | + | 0.0013 | = | 0.0283 | 187,859 | + | 8,801 | = | 196,660 |
| OBMC | 0.0167 | + | 0.0625 | = | 0.0792 | 115,708 | + | 433,580 | = | 549,288 |
| DBMC | 0.2477 | + | 0.0049 | = | 0.2526 | 1,719,194 | + | 33,728 | = | 1,752,922 |
| DSCF | 0.4852 | + | 0.0069 | = | 0.4921 | 3,367,331 | + | 47,582 | = | 3,414,913 |
| DAO | 0.1464 | + | 0.0000 | = | 0.1464 | 1,015,622 | + | 0 | = | 1,015,622 |
| Totals | 0.9243 | | 0.0757 | | 1.0000 | 6,413,812 | | 525,643 | | 6,939,455 |

| Origin | BY Pounds | Total Pct | By Pounds | Dest | Flow | Type of Trans |
|---|---|---|---|---|---|---|
| OAO | 10,051 | 0.0123 | 124 | DAO | 1 | Intra-SCF |
| | | 0.3778 | 3,797 | DSCF | 2 | Intra-SCF |
| | | 0.3839 | 3,858 | OSCF | 3 | Intra-SCF |
| | | 0.1295 | 1,302 | OBMC | 4 | Intra-BMC |
| | | 0.0965 | 970 | DBMC | 5 | Intra-BMC |
| OSCF | 200,518 | 0.3249 | 65,148 | DBMC | 6 | Intra-BMC |
| | | 0.4362 | 87,466 | OBMC | 7 | Intra-BMC |
| | | 0.2314 | 46,400 | DSCF | 8 | Inter-SCF |
| | | 0.0075 | 1,504 | DAO | 9 | Inter-SCF |
| OBMC | 638,055 | 1.0000 | 638,055 | DBMC | 10 | Inter-BMC |
| DBMC | 2,457,095 | 0.9686 | 2,379,943 | DSCF | 11 | Intra-BMC |
| | | 0.0314 | 77,153 | DAO | 12 | Intra-BMC |
| DSCF | 5,794,855 | 1.0000 | 5,794,855 | DAO | 13 | Intra-SCF |
| | 50,197 | | 50,197 | DAO | 13 | Intra-SCF |
| DAO | 6,939,455 | | | | | |

| Deposit Points | Source | Volume | Percentage |
|---|---|---|---|
| OSCF | Mailer | 187,859 | 93.69% |
| | Service Area | 12,659 | 6.31% |
| | Total | 200,518 | 100.00% |
| OBMC | Mailer | 115,708 | 18.13% |
| | Service Area | 522,347 | 81.87% |
| | Total | 638,055 | 100.00% |
| DBMC | Mailer | 1,719,194 | 69.97% |
| | Service Area | 99,846 | 4.06% |
| | OBMC | 638,055 | 25.97% |
| | Total | 2,457,095 | 100.00% |
| DSCF | Mailer | 3,367,331 | 57.61% |
| | Service Area | 97,779 | 1.67% |
| | DBMC | 2,379,943 | 40.72% |
| | Total | 5,845,052 | 100.00% |

This table assigns BY pounds for each deposit point to the mail flow proportions (Attachment A, Table 3), in order to calculate the probabilities that deposited mail will receive an operation or handling.

**Attachment E, Table 4**
**Input Percentages for Sack/Tray Models**

| Facility | Container | Band | Manual Induct APC/OTR | SSM | Roller Table | Manual Induct Pallet | Direct Runout (bedload) | Direct Runout (container) | Sawtooth |
|---|---|---|---|---|---|---|---|---|---|
| OSCF | | | | | | | | | |
| | Tray | 69.97% | | | | | | | |
| OBMC | | | | | | | | | |
| | Sack | | 10.00% | | | | | | |
| | Tray | | 10.00% | 78.99% | 21.01% | 50.00% | | | |
| DBMC | | | | | | | | | |
| | Sack | | 10.00% | | | | 71.77% | 1.75% | 26.48% |
| | Tray | | 10.00% | 78.99% | 21.01% | 50.00% | 71.77% | 1.75% | 26.48% |
| DSCF | | | | | | | | | |
| | Sack | | | 11.13% | 88.87% | | | 73.52% | 26.48% |
| | Tray | | | 4.93% | 95.07% | | | 73.52% | 26.48% |

This table consists of input percentages for different containers and deposit points. It is the exact same table used in Docket No. R97-1.

**Attachment E, Table 5**
**Productivities and Conversion Factors used in Sack Models**

| Operations | MTM Productivity (minutes per sack) | BMC Productivity (with variability) | SCF Productivity (with variability) |
|---|---|---|---|
| Transport APC from incoming staging area to outgoing staging area | 0.0787 | 0.0745 | 0.0705 |
| Transport APC from staging area on AO dock into small truck | 0.0123 | 0.0113 | 0.0113 |
| Transport APC out of/into small truck to/from staging area at SCF/BMC | 0.0177 | 0.0167 | 0.0159 |
| Transport APC to/from staging area on SCF/BMC dock out of/into van | 0.0193 | 0.0183 | 0.0173 |
| Move APC to/from sort area to/from staging area | 0.0394 | 0.0373 | 0.0353 |
| Sort sacks at roller table to rolling containers (APCs) | 0.2792 | 0.2756 | 0.2661 |
| USPS unload sacks to conveyor | 0.1599 | 0.1513 | 0.1433 |
| Manually dump sacks into SSM | 0.1817 | 0.1719 | 0.1628 |
| Key sack at SSM (3 digit) | 0.0787 | 0.0787 | 0.0787 |
| Key sack at SSM (5 digit) | 0.0917 | 0.0917 | 0.0917 |
| Bedload sacks from conveyor | 0.1851 | 0.1751 | 0.1658 |
| *Sort sacks at sawtooth to rolling containers (APCs)* | *0.3120* | *0.3079* | *0.2973* |
| Load sacks onto APC | 0.1178 | 0.1114 | 0.1055 |
| **Conversion Factors** | | | |
| Sacks per APC/OTR | 42 | | |
| Sacks per van | 1384 | | |

The MTM productivities and conversion factors are the same ones used in Docket No. R97-1. The variabilities used are consistent with the Postal Service filing in R2000-1 (see USPS-T-17, Table 1).
Conversion Factors are from Docket No. R97-1, LR-H-105/195

**Attachment E, Table 6**
**Productivities and Conversion Factors used in Tray Models**

| Operations | MTM Productivity (minutes per tray) | BMC Productivity (with variability) | SCF Productivity (with variability) |
|---|---|---|---|
| Transport APC from incoming staging area to outgoing staging area | 0.0976 | 0.0923 | 0.0874 |
| Transport APC from staging area on AO dock into small truck | 0.0152 | 0.0139 | 0.0139 |
| Transport APC out of/into small truck to/from staging area at SCF/BMC | 0.0219 | 0.0207 | 0.0196 |
| Transport APC to/from staging area on SCF/BMC dock out of/into van | 0.0239 | 0.0226 | 0.0214 |
| Move APC to/from sort area to/from staging area | 0.0488 | 0.0462 | 0.0437 |
| Sort trays at roller table to rolling containers (APCs) | 0.2792 | 0.2756 | 0.2661 |
| USPS unload trays to conveyor | 0.1058 | 0.1001 | 0.0948 |
| Manually dump trays into SSM from APC | 0.1412 | 0.1336 | 0.1265 |
| Key tray at SSM (3 digit) | 0.0787 | 0.0787 | 0.0787 |
| Key tray at SSM (5 digit) | 0.0917 | 0.0917 | 0.0917 |
| Bedload trays from conveyor | 0.1446 | 0.1368 | 0.1296 |
| Sort trays at sawtooth to rolling containers (APCs) | 0.2960 | 0.2922 | 0.2821 |
| Load trays onto APC | 0.1024 | 0.0969 | 0.0918 |
| Band trays | 0.1452 | 0.1374 | 0.1301 |
| Transport pallet from van to staging area on SCF/BMC dock | 0.0257 | 0.0243 | 0.0230 |
| Move pallet to sort area from staging area | 0.0224 | 0.0212 | 0.0201 |
| Manually dump trays into SSM from pallet | 0.1652 | 0.1563 | 0.1480 |
| **Conversion Factors** | | | |
| Trays per APC/OTR | 34 | | |
| Trays per pallet | 54 | | |
| Trays per van | 1384 | | |

The MTM productivities and conversion factors are the same ones used in Docket No. R97-1. The variabilities used are consistent with the Postal Service filing in R2000-1 (see USPS-T-17, Table 1).
Conversion Factors are from Docket No. R97-1, LR-H-105/195

**Attachment E, Table 7**
**Productivities and Conversion Factors used in Pallet Models**

| Operations | MTM Productivity (minutes per pallet) | BMC Productivity (with variability) | SCF Productivity (with variability) |
|---|---|---|---|
| Transport pallet from incoming staging area to outgoing staging area | 1.9704 | 1.8640 | 1.7655 |
| Transport pallet from staging area on AO dock into van | 0.6426 | 0.5893 | 0.5893 |
| Transport pallet out of van to staging area at SCF/BMC | 1.3877 | 1.3128 | 1.2434 |
| Transport pallet from staging area on SCF/BMC dock into van | 1.2852 | 1.2158 | 1.1515 |
| **Conversion Factors** | | | |
| Pallets per van | 22 | | |

The MTM productivities and conversion factors are the same ones used in Docket No. R97-1. The variabilities used are consistent with the Postal Service filing in R2000-1 (see USPS-T-17, Table 1).
Conversion Factors are from Docket No. R97-1, LR-H-105/195

# Attachment F - Table 1
## FY 1998 Standard Mail (A) Bulk Commercial Rate

| | PERMIT Estimate | | | Controlled to GFY RPW | | |
|---|---|---|---|---|---|---|
| **Letters** | Revenue | Pieces | Weight | Revenue | Pieces | Weight |
| Basic | 360,480 | 1,405,752 | 82,321 | 358,672 | 1,401,124 | 82,005 |
| Basic BC | 628,122 | 3,449,616 | 190,152 | 624,972 | 3,438,259 | 189,421 |
| 3/5-Digit | 478,026 | 2,355,063 | 110,967 | 475,629 | 2,347,309 | 110,541 |
| 3/5 Digit BC | 2,298,772 | 14,083,609 | 747,682 | 2,287,246 | 14,037,243 | 744,810 |
| Carrier Route | 1,313,407 | 9,570,441 | 441,317 | 1,349,198 | 9,864,091 | 465,074 |
| High Density | 44,670 | 353,719 | 20,922 | 45,887 | 364,572 | 22,049 |
| Saturation | 347,953 | 2,975,318 | 189,842 | 357,435 | 3,066,609 | 200,062 |
| Total Letters | 5,471,430 | 34,193,518 | 1,783,204 | 5,499,040 | 34,519,208 | 1,813,962 |
| **Flats** | Revenue | Pieces | Weight | Revenue | Pieces | Weight |
| Basic | 312,080 | 865,080 | 205,810 | 310,516 | 862,232 | 205,020 |
| Basic BC | 101,265 | 290,585 | 79,539 | 100,758 | 289,629 | 79,233 |
| 3/5-Digit | 425,728 | 1,659,987 | 350,420 | 423,593 | 1,654,522 | 349,074 |
| 3/5 Digit BC | 2,233,894 | 10,278,944 | 2,382,026 | 2,222,693 | 10,245,104 | 2,372,877 |
| Carrier Route | 1,825,751 | 10,762,958 | 2,308,580 | 1,875,504 | 11,093,198 | 2,432,856 |
| High Density | 194,592 | 1,270,685 | 254,169 | 199,895 | 1,309,674 | 267,852 |
| Saturation | 1,080,925 | 8,065,427 | 1,399,400 | 1,110,380 | 8,312,899 | 1,474,733 |
| Total Flats | 6,174,236 | 33,193,667 | 6,979,945 | 6,243,339 | 33,767,257 | 7,181,645 |
| **IPPs and Parcels** | Revenue | Pieces | Weight | Revenue | Pieces | Weight |
| Basic | 128,547 | 249,442 | 127,249 | 127,903 | 248,621 | 126,760 |
| Basic BC | - | - | - | - | - | - |
| 3/5-Digit | 261,180 | 564,832 | 323,848 | 259,870 | 562,972 | 322,604 |
| 3/5 Digit BC | - | - | - | - | - | - |
| Carrier Route | 4,630 | 27,700 | 5,516 | 4,757 | 28,550 | 5,813 |
| High Density | 412 | 2,333 | 595 | 423 | 2,404 | 627 |
| Saturation | 2,260 | 16,619 | 2,864 | 2,322 | 17,129 | 3,018 |
| Total IPPs and Parcels | 397,030 | 860,925 | 460,071 | 395,275 | 859,676 | 458,822 |
| **All Shapes** | Revenue | Pieces | Weight | Revenue | Pieces | Weight |
| Basic | 801,107 | 2,520,274 | 415,381 | 797,091 | 2,511,976 | 413,785 |
| Basic BC | 729,387 | 3,740,201 | 269,691 | 725,730 | 3,727,888 | 268,655 |
| 3/5-Digit | 1,164,934 | 4,579,882 | 785,235 | 1,159,093 | 4,564,804 | 782,220 |
| 3/5 Digit BC | 4,532,666 | 24,362,554 | 3,129,708 | 4,509,939 | 24,282,346 | 3,117,688 |
| Carrier Route | 3,143,789 | 20,361,098 | 2,755,413 | 3,229,459 | 20,985,839 | 2,903,743 |
| High Density | 239,674 | 1,626,737 | 275,686 | 246,205 | 1,676,650 | 290,527 |
| Saturation | 1,431,138 | 11,057,364 | 1,592,106 | 1,470,137 | 11,396,638 | 1,677,812 |
| Total All Shapes | 12,042,696 | 68,248,109 | 9,223,220 | 12,137,654 | 69,146,141 | 9,454,429 |

| **GFY RPW Total** | Revenue | Pieces | Weight |
|---|---|---|---|
| Basic and 3/5-Digit | 7,191,853 | 35,087,014 | 4,582,347 |
| Carrier Route | 4,945,801 | 34,059,127 | 4,872,082 |
| | 12,137,654 | 69,146,141 | 9,454,429 |

| **GFY RPW Factors** | Revenue | Pieces | Weight |
|---|---|---|---|
| Basic and 3/5-Digit | 0.99499 | 0.99671 | 0.99616 |
| Carrier Route | 1.02725 | 1.03068 | 1.05383 |

Source: Library Reference 102, Table 14.

# Attachment F - Table 2
## FY 1998 Standard Mail (A) Bulk Nonprofit Rate

| | PERMIT Estimate | | | Controlled to GFY RPW | | |
|---|---|---|---|---|---|---|
| **Letters** | Revenue | Pieces | Weight | Revenue | Pieces | Weight |
| Basic | 149,973 | 1,119,636 | 49,390 | 147,704 | 1,104,648 | 48,486 |
| Basic BC | 129,666 | 1,278,379 | 66,033 | 127,705 | 1,261,266 | 64,825 |
| 3/5-Digit | 214,104 | 1,951,472 | 74,244 | 210,866 | 1,925,348 | 72,886 |
| 3/5 Digit BC | 405,463 | 4,629,358 | 231,132 | 399,330 | 4,567,385 | 226,903 |
| Carrier Route | 92,439 | 1,192,933 | 54,313 | 93,542 | 1,208,562 | 54,285 |
| High Density | 3,049 | 44,321 | 1,155 | 3,086 | 44,902 | 1,155 |
| Saturation | 33,837 | 536,211 | 27,278 | 34,241 | 543,236 | 27,264 |
| Total Letters | 1,028,531 | 10,752,310 | 503,544 | 1,016,472 | 10,655,347 | 495,804 |
| **Flats** | Revenue | Pieces | Weight | Revenue | Pieces | Weight |
| Basic | 59,549 | 273,030 | 48,279 | 58,648 | 269,375 | 47,396 |
| Basic BC | 10,949 | 56,168 | 10,599 | 10,784 | 55,416 | 10,405 |
| 3/5-Digit | 63,910 | 408,998 | 61,986 | 62,943 | 403,523 | 60,852 |
| 3/5 Digit BC | 124,614 | 947,865 | 154,117 | 122,729 | 935,176 | 151,298 |
| Carrier Route | 57,122 | 565,178 | 74,694 | 57,803 | 572,583 | 74,657 |
| High Density | 954 | 10,398 | 1,410 | 965 | 10,534 | 1,409 |
| Saturation | 21,569 | 261,924 | 36,277 | 21,826 | 265,356 | 36,259 |
| Total Flats | 338,666 | 2,523,561 | 387,363 | 335,698 | 2,511,963 | 382,275 |
| **IPPs and Parcels** | Revenue | Pieces | Weight | Revenue | Pieces | Weight |
| Basic | 5,241 | 18,665 | 6,730 | 5,162 | 18,415 | 6,607 |
| Basic BC | - | - | - | - | - | - |
| 3/5-Digit | 5,744 | 24,412 | 9,083 | 5,657 | 24,085 | 8,917 |
| 3/5 Digit BC | - | - | - | - | - | - |
| Carrier Route | 34 | 230 | 69 | 35 | 233 | 69 |
| High Density | 14 | 98 | 37 | 14 | 100 | 37 |
| Saturation | 230 | 1,560 | 616 | 233 | 1,581 | 615 |
| Total IPPs and Parcels | 11,264 | 44,966 | 16,535 | 11,101 | 44,414 | 16,245 |
| **All Shapes** | Revenue | Pieces | Weight | Revenue | Pieces | Weight |
| Basic | 214,763 | 1,411,331 | 104,398 | 211,514 | 1,392,437 | 102,488 |
| Basic BC | 140,616 | 1,334,547 | 76,632 | 138,489 | 1,316,682 | 75,230 |
| 3/5-Digit | 283,758 | 2,384,882 | 145,313 | 279,466 | 2,352,956 | 142,654 |
| 3/5 Digit BC | 530,076 | 5,577,222 | 385,249 | 522,059 | 5,502,561 | 378,201 |
| Carrier Route | 149,595 | 1,758,341 | 129,076 | 151,379 | 1,781,379 | 129,011 |
| High Density | 4,017 | 54,818 | 2,603 | 4,065 | 55,536 | 2,602 |
| Saturation | 55,636 | 799,696 | 64,171 | 56,300 | 810,173 | 64,139 |
| Total All Shapes | 1,378,462 | 13,320,837 | 907,442 | 1,363,272 | 13,211,724 | 894,324 |

| **GFY RPW Total** | Revenue | Pieces | Weight |
|---|---|---|---|
| Basic and 3/5-Digit | 1,151,528 | 10,564,636 | 698,573 |
| Carrier Route | 211,744 | 2,647,088 | 195,751 |
| | 1,363,272 | 13,211,724 | 894,324 |

| **GFY RPW Factors** | Revenue | Pieces | Weight |
|---|---|---|---|
| Basic and 3/5-Digit | 0.98487 | 0.98661 | 0.98170 |
| Carrier Route | 1.01193 | 1.01310 | 0.99949 |

Source: Library Reference 102, Table 17.

## Table 3

### FY 1998 Bulk Standard Mail (A)

**Costs by Shape ($000)**

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| **C.S. 3.1 Mail Processing** | | | | | |
| 3.1a Mail Processing Variable w/ Pigbk | 4,325,440 | 1,896,870 | 1,989,874 | 438,696 | Sum of Tables 3.1 - 3.4 |
| 3.1b Remote Encoding Costs | - | - | | | |
| 3.1 Total | 4,325,440 | 1,896,870 | 1,989,874 | 438,696 | =sum(3.1a,3.1b) |
| **C.S. 3.2 Window Service** | | | | | |
| 3.2a CRA Window Service Total | 43,014 | 24,964 | 16,096 | 1,954 | C.S. 3.2 Total from CRA |
| 3.2b Window Service Piggyback Factor | - | | | | |
| 3.2c Piggybacked Costs | 19,353 | 11,232 | 7,242 | 879 | =sum(3.2a)*(3.2b - 1) |
| 3.2 Total | 62,367 | 36,196 | 23,337 | 2,833 | =sum(3.2a,3.2c) |
| **C.S. 6 & 7 City Delivery Carriers** | | | | | |
| 6 Llocatt In-Office | 1,115,913 | 528,427 | 555,075 | 32,411 | C.S. 6 CRA total |
| 7.1 Route | 66,043 | 33,970 | 31,380 | 694 | = CS total from CRA dist. to shape by Volume |
| 7.2 Access | 54,434 | 26,409 | 27,562 | 463 | = CS total from CRA dist. to shape by Volume |
| 7.3 Elemental Load | 739,143 | 330,963 | 340,169 | 68,011 | = CS total from CRA dist. to shape by ElemLoad |
| | - | - | - | - | |
| 7.5 Street Support | 325,665 | 151,389 | 157,628 | 16,647 | = CS total from CRA dist. to shape by 6 - 7.4 |
| 6&7 Subtotal | 2,301,198 | 1,071,157 | 1,111,815 | 118,226 | = sum of 6 through 7.5 |
| 6&7 Piggyback Factors | | | | | |
| 6&7 Piggybacked Costs | 818,043 | 379,998 | 396,289 | 41,756 | = 6&7 subtotal *( 6&7 pig. fact. - 1) |
| | - | - | - | - | |
| 6&7 Total | 3,119,241 | 1,451,156 | 1,508,103 | 159,982 | = sum( 6&7 subtotal, 6&7 piggybacked costs) |
| **C.S. 8 Vehicle Service Drivers** | | | | | |
| 8a Vehicle Service Drivers | 94,879 | 15,556 | 69,018 | 10,306 | = CS total from CRA dist. to shape by Cube |
| 8b Piggyback Factors | | | | | |
| 8c Piggybacked Costs | 51,606 | 8,458 | 37,542 | 5,606 | = 8a * (8b -1) |
| 8 Total | 146,485 | 24,014 | 106,559 | 15,911 | =sum( 8a, 8c) |
| **C.S. 10 Rural Delivery Carriers** | | | | | |
| 10a Rural Delivery Carriers | 760,264 | 328,952 | 417,095 | 14,216 | = CS total from CRA dist. to shape by RuralDel |

## Table 3

## FY 1998 Bulk Standard Mail (A)

### Costs by Shape ($000)

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| 10b Piggyback Factors | | | | | |
| 10c Piggybacked Costs | 183,984 | 79,606 | 100,937 | 3,440 | = 9a * (9b -1) |
| 10 Total | 944,248 | 408,558 | 518,033 | 17,657 | =sum( 9a, 9c) |
| **C.S 14 Transportation** | | | | | |
| 14.1a Domestic Air | 22,788 | 7,407 | 13,590 | 1,791 | C.S. Total dist to shape by Weight |
| 14.1b Highway | 297,502 | 58,745 | 187,761 | 50,996 | C.S. Total dist to shape by Cube |
| 14.1c Railroad | 91,572 | 18,399 | 56,482 | 16,691 | C.S. Total dist to shape by Cube |
| 14.1d Domestic Water | 7,913 | 2,197 | 5,116 | 600 | C.S. Total dist to shape by Weight |
| 14.2 International Transportation | - | - | - | - | C.S. Total dist to shape by Weight |
| 14 Total | 419,775 | 86,747 | 262,950 | 70,078 | = sum of 14.1a through 14.2 |
| **All Other Costs** | | | | | |
| A. CRA Total for Rate Category | 9,070,037 | | | | CRA total attributable for rate category |
| B. Sum of C.S. Totals from above | 9,017,555 | | | | Sum of C.S. totals above |
| C. Difference | 52,482 | | | | = A - B |
| Total All Other | 52,482 | 26,014 | 26,106 | 361 | = C dist. to shape by Volume |
| **Total Attributable** | 9,070,037 | 3,929,556 | 4,434,962 | 705,519 | |
| | | 43.32% | 48.90% | 7.78% | |
| **Attibutable Cost per Piece (Dollars)** | 0.110 | 0.087 | 0.122 | 0.780 | |

| **Distribution Keys** | | | | | **Key Name** | **Source** |
|---|---|---|---|---|---|---|
| 1 Volume of Mail (000) | 82,357,865 | 45,174,555 | 36,279,220 | 904,090 | | Table 1 & 2 |
| 2 Weight of Mail (000) | 10,348,752 | 2,309,766 | 7,563,919 | 475,067 | | Table 1 & 2 |
| 4 Cube of Mail (000) | 506,070 | 81,273 | 366,291 | 58,506 | | = Weight / Density |

**FY 1998 Bulk Standard Mail (A) Enhanced Carrier Route**

**Table 3.1**
**Costs by Shape ($000)**

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| **C.S. 3.1 Mail Processing** | | | | | |
| 3.1 Mail Processing Variable w/ PB, etc. | 454,971 | 200,400 | 241,382 | 13,189 | LR-I-81, Costs by Shape |
| 3.1 Total | 454,971 | 200,400 | 241,382 | 13,189 | =sum(3.1a,3.1b) |
| **C.S. 3.2 Window Service** | | | | | |
| 3.2a CRA Window Service Total | 7,896 | 3,366 | 4,520 | 10 | C.S. 3.2 Total from CRA |
| 3.2b Window Service Piggyback Factor | | 1.450 | 1.450 | 1.450 | USPS-T-21, Attachment 10 |
| 3.2c Piggybacked Costs | | 1,515 | 2,034 | 5 | =sum(3.2a)*(3.2b - 1) |
| 3.2 Total | 11,449 | 4,881 | 6,554 | 15 | =sum(3.2a,3.2c) |
| **C.S. 6 & 7 City Delivery Carriers** | | | | | |
| 6 Llocatt In-Office | 339,053 | 133,951 | 196,816 | 8,286 | C.S. 6 CRA total |
| 7.1 Route | 33,239 | 12,975 | 20,217 | 47 | = CS total from CRA dist. to shape by Volume |
| 7.2 Access | 32,931 | 12,855 | 20,030 | 46 | = CS total from CRA dist. to shape by Volume |
| 7.3 Elemental Load | 352,282 | 120,833 | 226,059 | 5,390 | = CS total from CRA dist. to shape by ElemLoa |
| sum 6 - 7.3 | 757,505 | 280,614 | 463,122 | 13,769 | |
| 7.4 Street Support | 126,519 | 46,868 | 77,351 | 2,300 | = CS total from CRA dist. to shape by CS 6 - 7. |
| 6&7 Subtotal | 884,024 | 327,482 | 540,473 | 16,069 | = sum of 6 through 7.4 |
| 6&7 Piggyback Factors | | 1.361 | 1.361 | 1.361 | USPS-T-21, Attachment 10 |
| 6&7 Piggybacked Costs | 319,133 | 118,221 | 195,111 | 5,801 | = 6&7 subtotal *( 6&7 pig. fact. - 1) |
| 6&7 Total | 1,203,157 | 445,703 | 735,583 | 21,870 | = sum( 6&7 subtotal, 6&7 piggybacked costs) |
| **C.S. 8 Vehicle Service Drivers** | | | | | |
| 8a Vehicle Service Drivers | 44,490 | 4,728 | 39,535 | 228 | = CS total from CRA dist. to shape by Cube |
| 8b Piggyback Factors | | 1.544 | 1.544 | 1.544 | USPS-T-21, Attachment 10 |
| 8c Piggybacked Costs | 24,203 | 2,572 | 21,507 | 124 | = 8a * (8b -1) |
| 8 Total | 68,693 | 7,299 | 61,041 | 352 | =sum( 8a, 8c) |
| **C.S. 10 Rural Delivery Carriers** | | | | | |
| 10a Rural Delivery Carriers | 326,363 | 121,766 | 204,499 | 98 | = CS total from CRA dist. to shape by RuralDel |
| 10b Piggyback Factors | | 1.242 | 1.242 | 1.242 | USPS-T-21, Attachment 10 |
| 10c Piggybacked Costs | 78,980 | 29,467 | 49,489 | 24 | = 9a * (9b -1) |

**FY 1998 Bulk Standard Mail (A) Enhanced Carrier Route**

**Table 3.1**
**Costs by Shape ($000)**

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| 10 Total | 405,343 | 151,233 | 253,988 | 122 | =sum( 9a, 9c) |
| **C.S 14 Transportation** | | | | | |
| 14.1a Domestic Air | 390 | 55 | 334 | 1 | C.S. Total dist to shape by Weight |
| 14.1b Highway | 46,707 | 4,963 | 41,505 | 239 | C.S. Total dist to shape by Cube |
| 14.1c Railroad | 9,995 | 1,062 | 8,882 | 51 | C.S. Total dist to shape by Cube |
| 14.1d Domestic Water | 955 | 135 | 818 | 2 | C.S. Total dist to shape by Weight |
| 14.2 International Transportation | 0 | 0 | 0 | 0 | C.S. Total dist to shape by Weight |
| 14 Total | 58,047 | 6,215 | 51,539 | 293 | = sum of 14.1a through 14.2 |
| **All Other Costs** | | | | | |
| A. CRA Total for Subclass | 2,234,488 | | | | BY CRA total vol. var. for subclass |
| B. Sum of C.S. Totals from above | 2,201,659 | | | | Sum of C.S. totals above |
| C. Difference | 32,829 | | | | = A - B |
| Total All Other | 32,829 | 12,815 | 19,967 | 46 | = C dist. to shape by Volume |
| **Total Attributable** | 2,234,488 | 828,547 | 1,370,055 | 35,886 | |
| | | 37.08% | 61.31% | 1.61% | |
| **Attibutable Cost per Piece (Dollars)** | 0.066 | 0.062 | 0.066 | 0.746 | |

| | **Distribution Keys** | | | | | **Key Name** | **Source** |
|---|---|---|---|---|---|---|---|
| 1 | Volume of Mail (000) | 34,059,127 | 13,295,273 | 20,715,771 | 48,083 | | Table 1 |
| 2 | Weight of Mail (000) | 4,872,081 | 687,184 | 4,175,440 | 9,457 | | Table 1 |
| 3 | Density of Mail (pounds / cubic feet) | 21.41 | 28.42 | 20.65 | 8.12 | | LR-MCR-13, LR-PCR-38 |
| 4 | Cube of Mail (000) | 227,545 | 24,180 | 202,200 | 1,165 | | = Weight / Density |
| 5 | Key - Volume of Mail (percent by shape) | 100.00% | 39.04% | 60.82% | 0.14% | Volume | Share of (1) by shape |
| 6 | Key - Weight of Mail (percent by shape) | 100.00% | 14.10% | 85.70% | 0.19% | Weight | Share of (2) by shape |
| 7 | Key - Cube of Mail (percent by shape) | 100.00% | 10.63% | 88.86% | 0.51% | Cube | Share of (4) by shape |
| 8 | | | | | | | |
| 9 | Elemental Load Key | 100.00% | 34.30% | 64.17% | 1.53% | Elem Load | LR-I-95, Devel of Deliv Costs |
| 10 | Rural Delivery Key | 100.00% | 37.31% | 62.66% | 0.03% | Rural ccs | LR-I-95, Devel of Deliv Costs |
| | Carrier In-Office Key | 100.00% | 39.51% | 58.05% | 2.44% | City Carrier I/o | USPS-T-11, Report ALA860p13 |
| | Window Service Key | 100.00% | 42.63% | 57.24% | 0.13% | WindowB | LR-I-99, Window Cost Data |

**FY 1998 Bulk Standard Mail (A) Regular**

**Table 3.2**
**Costs by Shape($000)**

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| **C.S. 3.1 Mail Processing** | | | | | |
| 3.1 Mail Processing Variable w/ PB, etc. | 3,159,074 | 1,236,375 | 1,530,822 | 391,877 | LR-I-81, Costs by Shape |
| 3.1 Total | 3,159,074 | 1,236,375 | 1,530,822 | 391,877 | =sum(3.1a,3.1b) |
| **C.S. 3.2 Window Service** | | | | | |
| 3.2a CRA Window Service Total | 25,690 | 15,034 | 8,827 | 1,829 | C.S. 3.2 Total from CRA |
| 3.2b Window Service Piggyback Factor | | 1.450 | 1.450 | 1.450 | USPS-T-21, Attachment 10 |
| 3.2c Piggybacked Costs | | 6,765 | 3,972 | 823 | =sum(3.2a)*(3.2b - 1) |
| 3.2 Total | 37,251 | 21,799 | 12,799 | 2,652 | =sum(3.2a,3.2c) |
| **C.S. 6 & 7 City Delivery Carriers** | | | | | |
| 6 Liocatt In-Office | 626,130 | 291,339 | 312,427 | 22,364 | C.S. 6 CRA total |
| 7.1 Route | 27,123 | 16,407 | 10,089 | 627 | = CS total from CRA dist. to shape by Volume |
| 7.2 Access | 17,661 | 10,683 | 6,569 | 409 | = CS total from CRA dist. to shape by Volume |
| 7.3 Elemental Load | 297,595 | 143,024 | 95,082 | 59,489 | = CS total from CRA dist. to shape by ElemLoac |
| sum 6 - 7.3 | 968,509 | 461,453 | 424,167 | 82,889 | |
| 7.4 Street Support | 158,229 | 75,389 | 69,298 | 13,542 | = CS total from CRA dist. to shape by CS 6 - 7.4 |
| 6&7 Subtotal | 1,126,738 | 536,842 | 493,465 | 96,431 | = sum of 6 through 7.4 |
| 6&7 Piggyback Factors | | 1.352 | 1.352 | 1.352 | USPS-T-21, Attachment 10 |
| 6&7 Piggybacked Costs | 396,612 | 188,968 | 173,700 | 33,944 | = 6&7 subtotal *( 6&7 pig. fact. - 1) |
| 6&7 Total | 1,523,350 | 725,811 | 667,164 | 130,375 | = sum( 6&7 subtotal, 6&7 piggybacked costs) |
| **C.S. 8 Vehicle Service Drivers** | | | | | |
| 8a Vehicle Service Drivers | 41,844 | 6,896 | 25,322 | 9,626 | = CS total from CRA dist. to shape by Cube |
| 8b Piggyback Factors | | 1.544 | 1.544 | 1.544 | USPS-T-21, Attachment 10 |
| 8c Piggybacked Costs | 22,763 | 3,752 | 13,775 | 5,236 | = 8a * (8b -1) |
| 8 Total | 64,607 | 10,648 | 39,097 | 14,862 | =sum( 8a, 8c) |
| **C.S. 10 Rural Delivery Carriers** | | | | | |
| 10a Rural Delivery Carriers | 350,762 | 149,179 | 188,008 | 13,574 | = CS total from CRA dist. to shape by RuralDel |
| 10b Piggyback Factors | | 1.242 | 1.242 | 1.242 | USPS-T-21, Attachment 10 |
| 10c Piggybacked Costs | 84,884 | 36,101 | 45,498 | 3,285 | = 9a * (9b -1) |

**FY 1998 Bulk Standard Mail (A) Regular**

**Table 3.2**
**Costs by Shape($000)**

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| 10 Total | 435,646 | 185,280 | 233,506 | 16,860 | =sum( 9a, 9c) |
| **C.S 14 Transportation** | | | | | |
| 14.1a Domestic Air | 17,047 | 4,192 | 11,184 | 1,672 | C.S. Total dist to shape by Weight |
| 14.1b Highway | 210,499 | 34,692 | 127,383 | 48,424 | C.S. Total dist to shape by Cube |
| 14.1c Railroad | 69,128 | 11,393 | 41,833 | 15,902 | C.S. Total dist to shape by Cube |
| 14.1d Domestic Water | 5,879 | 1,446 | 3,857 | 577 | C.S. Total dist to shape by Weight |
| 14.2 International Transportation | 0 | 0 | 0 | 0 | C.S. Total dist to shape by Weight |
| 14 Total | 302,553 | 51,722 | 184,257 | 66,574 | = sum of 14.1a through 14.2 |
| **All Other Costs** | | | | | |
| A. CRA Total for Subclass | 5,535,166 | | | | BY CRA total vol. var. for subclass |
| B. Sum of C.S. Totals from above | 5,522,481 | | | | Sum of C.S. totals above |
| C. Difference | 12,685 | | | | = A - B |
| Total All Other | 12,685 | 7,673 | 4,719 | 293 | = C dist. to shape by Volume |
| **Total Attributable** | 5,535,166 | 2,239,308 | 2,672,364 | 623,493 | |
| | | 40.46% | 48.28% | 11.26% | |
| **Attibutable Cost per Piece (Dollars)** | 0.158 | 0.106 | 0.205 | 0.768 | |

| | **Distribution Keys** | | | | | **Key Name** | **Source** |
|---|---|---|---|---|---|---|---|
| 1 | Volume of Mail (000) | 35,087,014 | 21,223,935 | 13,051,486 | 811,593 | | Table 1 |
| 2 | Weight of Mail (000) | 4,582,347 | 1,126,778 | 3,006,204 | 449,365 | | Table 1 |
| 3 | Density of Mail (pounds / cubic feet) | 19.05 | 28.42 | 20.65 | 8.12 | | LR-MCR-13, LR-PCR-38 |
| 4 | Cube of Mail (000) | 240,567 | 39,647 | 145,579 | 55,341 | | = Weight / Density |
| 5 | Key - Volume of Mail (percent by shape) | 100.00% | 60.49% | 37.20% | 2.31% | Volume | Share of (1) by shape |
| 6 | Key - Weight of Mail (percent by shape) | 100.00% | 24.59% | 65.60% | 9.81% | Weight | Share of (2) by shape |
| 7 | Key - Cube of Mail (percent by shape) | 100.00% | 16.48% | 60.51% | 23.00% | Cube | Share of (4) by shape |
| 8 | | | | | | | |
| 9 | Elemental Load Key | 100.00% | 48.06% | 31.95% | 19.99% | Elem Load | LR-I-95, Devel of Deliv Costs |
| 10 | Rural Delivery Key | 100.00% | 42.53% | 53.60% | 3.87% | Rural ccs | LR-I-95, Devel of Deliv Costs |
| | Carrier In-Office Key | 100.00% | 46.53% | 49.90% | 3.57% | City Carrier I/o | USPS-T-11, Report ALA860p13 |
| | Window Service Key | 100.00% | 58.52% | 34.36% | 7.12% | WindowB | LR-I-99, Window Cost Data |

**FY 1998 Bulk Standard Mail (A) Nonprofit ECR**

**Table 3.3**
**Costs by Shape($000)**

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| **C.S. 3.1 Mail Processing** | | | | | |
| 3.1 Mail Processing Variable w/ PB, etc. | 71,282 | 43,807 | 23,610 | 3,865 | LR-I-81, Costs by Shape |
| 3.1 Total | 71,282 | 43,807 | 23,610 | 3,865 | =sum(3.1a,3.1b) |
| **C.S. 3.2 Window Service** | | | | | |
| 3.2a CRA Window Service Total | 610 | 351 | 254 | 4 | C.S. 3.2 Total from CRA |
| 3.2b Window Service Piggyback Factor | | 1.444 | 1.444 | 1.444 | USPS-T-21, Attachment 10 |
| 3.2c Piggybacked Costs | | 156 | 113 | 2 | =sum(3.2a)*(3.2b - 1) |
| 3.2 Total | 881 | 507 | 367 | 6 | =sum(3.2a,3.2c) |
| **C.S. 6 & 7 City Delivery Carriers** | | | | | |
| 6 Liocatt In-Office | 23,815 | 13,712 | 9,928 | 175 | C.S. 6 CRA total |
| 7.1 Route | 1,099 | 746 | 352 | 1 | = CS total from 0.1923 |
| 7.2 Access | 2,197 | 1,491 | 704 | 2 | = CS total from CRA dist. to shape by Volume |
| 7.3 Elemental Load | 16,495 | 9,857 | 6,591 | 46 | = CS total from CRA dist. to shape by ElemLoac |
| sum 6 - 7.3 | 43,606 | 25,806 | 17,576 | 224 | |
| 7.4 Street Support | 7,210 | 4,267 | 2,906 | 37 | = CS total from CRA dist. to shape by CS 6 - 7.4 |
| 6&7 Subtotal | 50,816 | 30,073 | 20,482 | 261 | = sum of 6 through 7.4 |
| 6&7 Piggyback Factors | | 1.358 | 1.358 | 1.358 | USPS-T-21, Attachment 10 |
| 6&7 Piggybacked Costs | 18,192 | 10,766 | 7,333 | 93 | = 6&7 subtotal *( 6&7 pig. fact. - 1) |
| 6&7 Total | 69,008 | 40,839 | 27,815 | 354 | = sum( 6&7 subtotal, 6&7 piggybacked costs) |
| **C.S. 8 Vehicle Service Drivers** | | | | | |
| 8a Vehicle Service Drivers | 1,870 | 645 | 1,205 | 20 | = CS total from CRA dist. to shape by Cube |
| 8b Piggyback Factors | | 1.543 | 1.543 | 1.543 | USPS-T-21, Attachment 10 |
| 8c Piggybacked Costs | 1,015 | 350 | 655 | 11 | = 8a * (8b -1) |
| 8 Total | 2,885 | 995 | 1,860 | 30 | =sum( 8a, 8c) |
| **C.S. 10 Rural Delivery Carriers** | | | | | |
| 10a Rural Delivery Carriers | 13,918 | 9,352 | 4,562 | 4 | = CS total from CRA dist. to shape by RuralDel |
| 10b Piggyback Factors | | 1.242 | 1.242 | 1.242 | USPS-T-21, Attachment 10 |
| 10c Piggybacked Costs | 3,368 | 2,263 | 1,104 | 1 | = 9a * (9b -1) |

**FY 1998 Bulk Standard Mail (A) Nonprofit ECR**

**Table 3.3**
**Costs by Shape($000)**

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| 10 Total | 17,286 | 11,615 | 5,666 | 5 | =sum( 9a, 9c) |
| **C.S 14 Transportation** | | | | | |
| 14.1a Domestic Air | 24 | 10 | 14 | 0 | C.S. Total dist to shape by Weight |
| 14.1b Highway | 5,097 | 1,758 | 3,286 | 54 | C.S. Total dist to shape by Cube |
| 14.1c Railroad | 1,262 | 435 | 813 | 13 | C.S. Total dist to shape by Cube |
| 14.1d Domestic Water | 128 | 54 | 73 | 0 | C.S. Total dist to shape by Weight |
| 14.2 International Transportation | 0 | 0 | 0 | 0 | C.S. Total dist to shape by Weight |
| 14 Total | 6,511 | 2,257 | 4,186 | 68 | = sum of 14.1a through 14.2 |
| **All Other Costs** | | | | | |
| A. CRA Total for Subclass | 169,833 | | | | BY CRA total vol. var. for subclass |
| B. Sum of C.S. Totals from above | 167,854 | | | | Sum of C.S. totals above |
| C. Difference | 1,979 | | | | = A - B |
| Total All Other | 1,979 | 1,344 | 634 | 1 | = C dist. to shape by Volume |
| **Total Attributable** | 169,833 | 101,364 | 64,139 | 4,330 | |
| | | 59.68% | 37.77% | 2.55% | |
| **Attibutable Cost per Piece (Dollars)** | 0.064 | 0.056 | 0.076 | 2.262 | |

| | Distribution Keys | | | | | Key Name | Source |
|---|---|---|---|---|---|---|---|
| 1 | Volume of Mail (000) | 2,647,088 | 1,796,701 | 848,473 | 1,914 | | Table 2 |
| 2 | Weight of Mail (000) | 195,751 | 82,704 | 112,325 | 722 | | Table 2 |
| 3 | Density of Mail (pounds / cubic feet) | 23.20 | 28.42 | 20.65 | 8.12 | | LR-MCR-13, LR-PCR-38 |
| 4 | Cube of Mail (000) | 8,438 | 2,910 | 5,439 | 89 | | = Weight / Density |
| 5 | Key - Volume of Mail (percent by shape | 100.00% | 67.87% | 32.05% | 0.07% | Volume | Share of (1) by shape |
| 6 | Key - Weight of Mail (percent by shape) | 100.00% | 42.25% | 57.38% | 0.37% | Weight | Share of (2) by shape |
| 7 | Key - Cube of Mail (percent by shape) | 100.00% | 34.49% | 64.46% | 1.05% | Cube | Share of (4) by shape |
| 8 | | | | | | | |
| 9 | Elemental Load Key | 100.00% | 59.76% | 39.96% | 0.28% | Elem Load | LR-I-95, Devel of Deliv Costs |
| 10 | Rural Delivery Key | 100.00% | 67.19% | 32.78% | 0.03% | Rural ccs | LR-I-95, Devel of Deliv Costs |
| | Carrier In-Office Key | 100.00% | 57.58% | 41.69% | 0.74% | City Carrier I/o | USPS-T-11, Report ALA860p13 |
| | Window Service Key | 100.00% | 73.26% | 26.68% | 0.06% | WindowB | LR-I-99, Window Cost Data |

**FY 1998 Bulk Standard Mail (A) Nonprofit**

**Table 3.4**
**Costs by Shape($000)**

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| **C.S. 3.1 Mail Processing** | | | | | |
| 3.1 Mail Processing Variable w/ PB, etc. | 640,113 | 416,288 | 194,060 | 29,765 | LR-I-81, Costs by Shape |
| 3.1 Total | 640,113 | 416,288 | 194,060 | 29,765 | =sum(3.1a,3.1b) |
| **C.S. 3.2 Window Service** | | | | | |
| 3.2a CRA Window Service Total | 8,818 | 6,213 | 2,495 | 110 | C.S. 3.2 Total from CRA |
| 3.2b Window Service Piggyback Factor | | 1.450 | 1.450 | 1.450 | USPS-T-21, Attachment 10 |
| 3.2c Piggybacked Costs | | 2,796 | 1,123 | 50 | =sum(3.2a)*(3.2b - 1) |
| 3.2 Total | 12,786 | 9,009 | 3,617 | 160 | =sum(3.2a,3.2c) |
| **C.S. 6 & 7 City Delivery Carriers** | | | | | |
| 6 Liocatt In-Office | 126,915 | 89,424 | 35,904 | 1,586 | C.S. 6 CRA total |
| 7.1 Route | 4,582 | 3,842 | 721 | 18 | = CS total from 0.1923 |
| 7.2 Access | 1,645 | 1,379 | 259 | 7 | = CS total from CRA dist. to shape by Volume |
| 7.3 Elemental Load | 72,771 | 57,249 | 12,437 | 3,085 | = CS total from CRA dist. to shape by ElemLoac |
| sum 6 - 7.3 | 205,913 | 151,895 | 49,321 | 4,697 | |
| 7.4 Street Support | 33,707 | 24,864 | 8,074 | 769 | = CS total from CRA dist. to shape by CS 6 - 7.4 |
| 6&7 Subtotal | 239,620 | 176,759 | 57,395 | 5,466 | = sum of 6 through 7.4 |
| 6&7 Piggyback Factors | | 1.351 | 1.351 | 1.351 | USPS-T-21, Attachment 10 |
| 6&7 Piggybacked Costs | 84,107 | 62,043 | 20,146 | 1,918 | = 6&7 subtotal *( 6&7 pig. fact. - 1) |
| 6&7 Total | 323,727 | 238,802 | 77,541 | 7,384 | = sum( 6&7 subtotal, 6&7 piggybacked costs) |
| **C.S. 8 Vehicle Service Drivers** | | | | | |
| 8a Vehicle Service Drivers | 6,675 | 3,287 | 2,956 | 432 | = CS total from CRA dist. to shape by Cube |
| 8b Piggyback Factors | | 1.543 | 1.543 | 1.543 | USPS-T-21, Attachment 10 |
| 8c Piggybacked Costs | 3,625 | 1,785 | 1,605 | 235 | = 8a * (8b -1) |
| 8 Total | 10,300 | 5,071 | 4,561 | 667 | =sum( 8a, 8c) |
| **C.S. 10 Rural Delivery Carriers** | | | | | |
| 10a Rural Delivery Carriers | 69,221 | 48,655 | 20,026 | 540 | = CS total from CRA dist. to shape by RuralDel |
| 10b Piggyback Factors | | 1.242 | 1.242 | 1.242 | USPS-T-21, Attachment 10 |
| 10c Piggybacked Costs | 16,751 | 11,775 | 4,846 | 131 | = 9a * (9b -1) |

**FY 1998 Bulk Standard Mail (A) Nonprofit**

**Table 3.4**
**Costs by Shape($000)**

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| 10 Total | 85,972 | 60,430 | 24,872 | 671 | =sum( 9a, 9c) |
| **C.S 14 Transportation** | | | | | |
| 14.1a Domestic Air | 5,327 | 3,150 | 2,059 | 118 | C.S. Total dist to shape by Weight |
| 14.1b Highway | 35,199 | 17,332 | 15,588 | 2,279 | C.S. Total dist to shape by Cube |
| 14.1c Railroad | 11,187 | 5,508 | 4,954 | 724 | C.S. Total dist to shape by Cube |
| 14.1d Domestic Water | 951 | 562 | 367 | 21 | C.S. Total dist to shape by Weight |
| 14.2 International Transportation | 0 | 0 | 0 | 0 | C.S. Total dist to shape by Weight |
| 14 Total | 52,664 | 26,553 | 22,968 | 3,143 | = sum of 14.1a through 14.2 |
| **All Other Costs** | | | | | |
| A. CRA Total for Subclass | 1,130,550 | | | | BY CRA total vol. var. for subclass |
| B. Sum of C.S. Totals from above | 1,125,562 | | | | Sum of C.S. totals above |
| C. Difference | 4,988 | | | | = A - B |
| Total All Other | 4,988 | 4,183 | 785 | 20 | = C dist. to shape by Volume |
| **Total Attributable** | 1,130,550 | 760,336 | 328,404 | 41,810 | |
| | | 67.25% | 29.05% | 3.70% | |
| **Attibutable Cost per Piece (Dollars)** | 0.107 | 0.086 | 0.197 | 0.984 | |

| | **Distribution Keys** | | | | | **Key Name** | **Source** |
|---|---|---|---|---|---|---|---|
| 1 | Volume of Mail (000) | 10,564,636 | 8,858,646 | 1,663,490 | 42,500 | | Table 2 |
| 2 | Weight of Mail (000) | 698,573 | 413,100 | 269,950 | 15,523 | | Table 2 |
| 3 | Density of Mail (pounds / cubic feet) | 23.66 | 28.42 | 20.65 | 8.12 | | LR-MCR-13, LR-PCR-38 |
| 4 | Cube of Mail (000) | 29,520 | 14,536 | 13,073 | 1,912 | | = Weight / Density |
| 5 | Key - Volume of Mail (percent by shape | 100.00% | 83.85% | 15.75% | 0.40% | Volume | Share of (1) by shape |
| 6 | Key - Weight of Mail (percent by shape) | 100.00% | 59.13% | 38.64% | 2.22% | Weight | Share of (2) by shape |
| 7 | Key - Cube of Mail (percent by shape) | 100.00% | 49.24% | 44.28% | 6.48% | Cube | Share of (4) by shape |
| 8 | | | | | | | |
| 9 | Elemental Load Key | 100.00% | 78.67% | 17.09% | 4.24% | Elem Load | LR-I-95, Devel of Deliv Costs |
| 10 | Rural Delivery Key | 100.00% | 70.29% | 28.93% | 0.78% | Rural ccs | LR-I-95, Devel of Deliv Costs |
| | Carrier In-Office Key | 100.00% | 70.46% | 28.29% | 1.25% | City Carrier I/o | USPS-T-11, Report ALA860p13 |
| | Window Service Key | 100.00% | 78.18% | 18.33% | 3.49% | WindowB | LR-I-99, Window Cost Data |

FY 1998 Bulk Standard Mail (A) carrier route - Total

**Table 3.5**
**Costs by Shape($000)**

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| **C.S. 3.1 Mail Processing** | | | | | |
| 3.1a Mail Processing Variable w/ Pigbk | 526,253 | 244,207 | 264,992 | 17,054 | Sum of Tables 3.1 & 3.3 |
| 3.1b Remote Encoding Costs | 0 | 0 | | | |
| 3.1 Total | 526,253 | 244,207 | 264,992 | 17,054 | =sum(3.1a,3.1b) |
| **C.S. 3.2 Window Service** | | | | | |
| 3.2a CRA Window Service Total | 8,506 | 3,717 | 4,774 | 15 | C.S. 3.2 Total from CRA |
| 3.2b Window Service Piggyback Factor | | | | | |
| 3.2c Piggybacked Costs | 3,824 | 1,671 | 2,147 | 7 | =sum(3.2a)*(3.2b - 1) |
| 3.2 Total | 12,330 | 5,388 | 6,921 | 21 | =sum(3.2a,3.2c) |
| **C.S. 6 & 7 City Delivery Carriers** | | | | | |
| 6 Liocatt In-Office | 362,868 | 147,663 | 206,744 | 8,461 | C.S. 6 CRA total |
| 7.1 Route | 34,338 | 13,721 | 20,569 | 48 | = CS total from CRA dist. to shape by Volume |
| 7.2 Access | 35,128 | 14,346 | 20,734 | 48 | = CS total from CRA dist. to shape by Volume |
| 7.3 Elemental Load | 368,777 | 130,690 | 232,651 | 5,436 | = CS total from CRA dist. to shape by ElemLoad |
| 7.5 Street Support | 133,729 | 51,135 | 80,257 | 2,337 | **= CS total from CRA dist. to shape by 6 - 7.4** |
| 6&7 Subtotal | 934,840 | 357,556 | 560,955 | 16,330 | = sum of 6 through 7.5 |
| 6&7 Piggyback Factors | | | | | |
| 6&7 Piggybacked Costs | | 128987 | 202443 | 5894 | = 6&7 subtotal *( 6&7 pig. fact. - 1) |
| 6&7 Total | 1,272,165 | 486,543 | 763,398 | 22,224 | = sum( 6&7 subtotal, 6&7 piggybacked costs) |
| **C.S. 8 Vehicle Service Drivers** | | | | | |
| 8a Vehicle Service Drivers | 46,360 | 5,373 | 40,740 | 247 | = CS total from CRA dist. to shape by Cube |
| 8b Piggyback Factors | | | | | |
| 8c Piggybacked Costs | 25,218 | 2,922 | 22,161 | 135 | = 8a * (8b -1) |
| 8 Total | 71,578 | 8,295 | 62,901 | 382 | =sum( 8a, 8c) |
| **C.S. 10 Rural Delivery Carriers** | | | | | |
| 10a Rural Delivery Carriers | 340,281 | 131,118 | 209,061 | 102 | = CS total from CRA dist. to shape by RuralDel |
| 10b Piggyback Factors | | | | | |

FY 1998 Bulk Standard Mail (A) carrier route - Total

**Table 3.5**
**Costs by Shape($000)**

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| 10c Piggybacked Costs | 82,348 | 31,730 | 50,593 | 25 | = 9a * (9b -1) |
| 10 Total | 422,629 | 162,848 | 259,654 | 127 | =sum( 9a, 9c) |
| **C.S 14 Transportation** | | | | | |
| 14.1a Domestic Air | 414 | 65 | 348 | 1 | C.S. Total dist to shape by Weight |
| 14.1b Highway | 51,804 | 6,721 | 44,790 | 293 | C.S. Total dist to shape by Cube |
| 14.1c Railroad | 11,257 | 1,497 | 9,695 | 64 | C.S. Total dist to shape by Cube |
| 14.1d Domestic Water | 1,083 | 189 | 892 | 2 | C.S. Total dist to shape by Weight |
| 14.2 International Transportation | 0 | 0 | 0 | 0 | C.S. Total dist to shape by Weight |
| 14 Total | 64,558 | 8,472 | 55,725 | 360 | = sum of 14.1a through 14.2 |
| **All Other Costs** | | | | | |
| A. CRA Total for Rate Category | 2,404,321 | | | | CRA total attributable for rate category |
| B. Sum of C.S. Totals from above | 2,369,513 | | | | Sum of C.S. totals above |
| C. Difference | 34,808 | | | | = A - B |
| Total All Other | 34,808 | 14,159 | 20,602 | 48 | = C dist. to shape by Volume |
| **Total Attributable** | 2,404,321 | 929,911 | 1,434,194 | 40,216 | |
| | | 38.68% | 59.65% | 1.67% | |
| **Attibutable Cost per Piece (Dollars)** | 0.066 | 0.062 | 0.067 | 0.804 | |

| **Distribution Keys** | | | | | | **Key Name** | **Source** |
|---|---|---|---|---|---|---|---|
| 1 | Volume of Mail (000) | 36,706,215 | 15,091,974 | 21,564,244 | 49,997 | | Tables 1 and 2 |
| 2 | Weight of Mail (000) | 5,067,832 | 769,888 | 4,287,765 | 10,179 | | Tables 1 and 2 |
| 3 | Cube of Mail (000) | 235,983 | 27,090 | 207,640 | 1,254 | | Sum of ECR and Nonprofit ECR |

FY 1998 Bulk Standard Mail (A) non-carrier route - Total

**Table 3.6**
**Costs by Shape($000)**

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| **C.S. 3.1 Mail Processing** | | | | | |
| 3.1a Mail Processing Variable w/ Pigbk | 3,799,187 | 1,652,663 | 1,724,882 | 421,642 | Sum of Tables 3.2 & 3.4 |
| 3.1b Remote Encoding Costs | 0 | 0 | | | |
| 3.1 Total | 3,799,187 | 1,652,663 | 1,724,882 | 421,642 | =sum(3.1a,3.1b) |
| **C.S. 3.2 Window Service** | | | | | |
| 3.2a CRA Window Service Total | 34,508 | 21,247 | 11,322 | 1,939 | C.S. 3.2 Total from CRA |
| 3.2b Window Service Piggyback Factor | | | | | |
| 3.2c Piggybacked Costs | 15,529 | 9,561 | 5,095 | 873 | =sum(3.2a)*(3.2b - 1) |
| 3.2 Total | 50,037 | 30,808 | 16,416 | 2,812 | =sum(3.2a,3.2c) |
| **C.S. 6 & 7 City Delivery Carriers** | | | | | |
| 6 Liocatt In-Office | 753,045 | 380,764 | 348,331 | 23,950 | C.S. 6 CRA total |
| 7.1 Route | 31,705 | 20,249 | 10,811 | 646 | = CS total from CRA dist. to shape by Volume |
| 7.2 Access | 19,306 | 12,062 | 6,828 | 415 | = CS total from CRA dist. to shape by Volume |
| 7.3 Elemental Load | 370,366 | 200,273 | 107,518 | 62,575 | = CS total from CRA dist. to shape by ElemLoad |
| 7.5 Street Support | 191,936 | 100,254 | 77,371 | 14,311 | **= CS total from CRA dist. to shape by 6 - 7.4** |
| 6&7 Subtotal | 1,366,358 | 713,602 | 550,860 | 101,897 | = sum of 6 through 7.5 |
| 6&7 Piggyback Factors | | | | | |
| 6&7 Piggybacked Costs | | 251011 | 193845 | 35862 | = 6&7 subtotal *( 6&7 pig. fact. - 1) |
| 6&7 Total | 1,847,076 | 964613 | 744705 | 137759 | = sum( 6&7 subtotal, 6&7 piggybacked costs) |
| **C.S. 8 Vehicle Service Drivers** | | | | | |
| 8a Vehicle Service Drivers | 48,519 | 10,183 | 28,278 | 10,058 | = CS total from CRA dist. to shape by Cube |
| 8b Piggyback Factors | | | | | |
| 8c Piggybacked Costs | 26,388 | 5,536 | 15,380 | 5,471 | = 8a * (8b -1) |
| 8 Total | 74,907 | 15,719 | 43,658 | 15,529 | =sum( 8a, 8c) |
| **C.S. 10 Rural Delivery Carriers** | | | | | |
| 10a Rural Delivery Carriers | 419,983 | 197,835 | 208,034 | 14,114 | = CS total from CRA dist. to shape by RuralDel |
| 10b Piggyback Factors | | | | | |

FY 1998 Bulk Standard Mail (A) non-carrier route - Total

**Table 3.6**
**Costs by Shape($000)**

| Cost Category | Sum over Shapes | Letters | Flats | IPPs & Parcels | Source / Derivation |
|---|---|---|---|---|---|
| 10c Piggybacked Costs | 101,636 | 47,876 | 50,344 | 3,416 | = 9a * (9b -1) |
| 10 Total | 521,619 | 245,710 | 258,378 | 17,530 | =sum( 9a, 9c) |
| **C.S 14 Transportation** | | | | | |
| 14.1a Domestic Air | 22,374 | 7,342 | 13,242 | 1,790 | C.S. Total dist to shape by Weight |
| 14.1b Highway | 245,698 | 52,024 | 142,971 | 50,703 | C.S. Total dist to shape by Cube |
| 14.1c Railroad | 80,315 | 16,901 | 46,787 | 16,627 | C.S. Total dist to shape by Cube |
| 14.1d Domestic Water | 6,830 | 2,008 | 4,224 | 598 | C.S. Total dist to shape by Weight |
| 14.2 International Transportation | 0 | 0 | 0 | 0 | C.S. Total dist to shape by Weight |
| 14 Total | 355,217 | 78,275 | 207,224 | 69,718 | = sum of 14.1a through 14.2 |
| **All Other Costs** | | | | | |
| A. CRA Total for Rate Category | 6,665,716 | | | | CRA total attributable for rate category |
| B. Sum of C.S. Totals from above | 6,648,043 | | | | Sum of C.S. totals above |
| C. Difference | 17,673 | | | | = A - B |
| Total All Other | 17,673 | 11,856 | 5,504 | 313 | = C dist. to shape by Volume |
| **Total Attributable** | 6,665,716 | 2,999,644 | 3,000,768 | 665,303 | |
| | | 45.00% | 45.02% | 9.98% | |
| **Attibutable Cost per Piece (Dollars)** | 0.146 | 0.100 | 0.204 | 0.779 | |

| **Distribution Keys** | | | | | | **Key Name** | **Source** |
|---|---|---|---|---|---|---|---|
| 1 | Volume of Mail (000) | 45,651,650 | 30,082,581 | 14,714,976 | 854,093 | | Tables 1 and 2 |
| 2 | Weight of Mail (000) | 5,280,920 | 1,539,878 | 3,276,154 | 464,888 | | Tables 1 and 2 |
| 3 | Cube of Mail (000) | 270,087 | 54,183 | 158,652 | 57,252 | | Sum of Regular and Nonprofit |

**Attachment F - Table 4**
**Calculation of Cost Difference Due to Differences in Presorting and Drop Shipment**
**FY 1998 Bulk Standard Mail (A)**

**1) Weight by Entry Discount (Attachment F, Table 5)**

| | None | BMC | SCF | DDU | Total |
|---|---|---|---|---|---|
| Flats | 1,598,596 | 1,615,327 | 3,202,790 | 1,147,205 | 7,563,918 |
| Parcels | 334,526 | 98,908 | 39,411 | 2,222 | 475,067 |

**2) Cost Avoidance $/lb (USPS-T-27, page 7)**

| None | BMC | SCF | DDU |
|---|---|---|---|
| 0 | 0.114 | 0.140 | 0.173 |

**3) Avoided Costs (= (1) * (2))**

| | None | BMC | SCF | DDU | Total | Average Avoided Cost/Piece | |
|---|---|---|---|---|---|---|---|
| Flats | 0 | 184,147 | 448,391 | 198,467 | 831,004 | 0.023 | (3a) = (3) total / (4) total |
| Parcels | 0 | 11,275 | 5,518 | 384 | 17,177 | 0.019 | (3b) = (3) total / (4) total |

**4) Pieces by Presort Level (Attachment F, Tables 1 and 2)**

| | Basic | 3/5 Digit | Carrier | 125 Walk | Saturation | Total |
|---|---|---|---|---|---|---|
| Flats | 1,476,651 | 13,238,324 | 11,665,781 | 1,320,208 | 8,578,255 | 36,279,220 |
| Parcels | 267,035 | 587,058 | 28,783 | 2,504 | 18,710 | 904,089 |

**5) Presort Cost Avoidances $ / pc**

| Basic | 3/5 Digit | Carrier | 125 Walk | Saturation | |
|---|---|---|---|---|---|
| 0 | 0.05949 | 0.16282 | 0.19953 | 0.20633 | From USPS-T-25, USPS-T-28: Take Avg. of Basic Auto and nonauto. Subtract avg. of 3/5 auto and nonauto, then subtract carrier route, 125, & Sat. All Avg. of Commercial & NP |

**Attachment F - Table 4**
**Calculation of Cost Difference Due to Differences in Presorting and Drop Shipment**
**FY 1998 Bulk Standard Mail (A)**

**6) Avoided Costs (= (4) * (5))**

| | Basic | 3/5 Digit | Carrier | 125 Walk | Saturation | Total | Average Avoided Cost/ Piece | |
|---|---|---|---|---|---|---|---|---|
| Flats | 0 | 787,548 | 1,899,423 | 263,421 | 1,769,951 | 4,720,343 | 0.130 | (6a) = (6) total / (4) total |
| Parcels | 0 | 34,924 | 4,686 | 500 | 3,860 | 43,970 | 0.049 | (6b) = (6) total / (4) total |

**7) Cost Difference Due to Differences in Entry and Presort Profile**

**Flats**

| | | |
|---|---|---|
| 7a) | 0.004 | $ / piece saved due to entry profile relative to parcels. (= (3a) - (3b)) |
| 7b) | 0.081 | $ / piece saved due to presort profile relative to parcels. (= (6a) - (6b)) |
| 7c) | 0.085 | $ / piece of difference in average costs of flats and parcels are explained by differences in presorting and entry profiles. (= (7a) + (7b)) |

Attachment F, Table 4.1

# Mail Entry Profile

## Standard Mail (A) Commercial Rate

Pieces (Thousands)

| Entry Type | Trays on Pallets | | Loose Trays | | Bundles or Sacks on Pallets | | Loose Sacks | | |
|---|---|---|---|---|---|---|---|---|---|
| | DS | PL | DS | PL | DS | PL | DS | PL | Total |
| ODU | 28,666 | - | 1,793,553 | 662,016 | 140 | 21,394 | 557,510 | 28,545 | 3,091,825 |
| OSCF | 309,555 | 56,160 | 5,015,971 | 94,956 | 991,649 | 56,663 | 1,166,395 | 71,026 | 7,762,376 |
| OBMC | 1,548,169 | 1,978,977 | 646,518 | 4,289,413 | 189,480 | 1,098,634 | 152,353 | 1,756,317 | 11,659,859 |
| DBMC | 6,209,102 | 205,231 | 2,700,832 | 193,837 | 6,039,259 | 72,476 | 1,569,659 | 77,107 | 17,067,503 |
| DSCF | 5,176,207 | 59,207 | 3,144,014 | 90,323 | 13,588,967 | 445,677 | 720,697 | - | 23,225,092 |
| DDU | 234,682 | - | 647,162 | 1,467 | 4,713,933 | - | 742,241 | - | 6,339,485 |
| | | | | | | | | | 69,146,141 |

Weight (Thousands)

| Entry Type | Trays on Pallets | | Loose Trays | | Bundles or Sacks on Pallets | | Loose Sacks | | |
|---|---|---|---|---|---|---|---|---|---|
| | DS | PL | DS | PL | DS | PL | DS | PL | Total |
| ODU | 1,200 | - | 86,048 | 39,872 | 20 | 1,953 | 206,423 | 2,508 | 338,024 |
| OSCF | 11,547 | 2,511 | 225,665 | 2,755 | 170,200 | 6,195 | 285,277 | 21,045 | 725,196 |
| OBMC | 70,504 | 87,298 | 18,050 | 312,546 | 38,451 | 318,132 | 7,331 | 345,984 | 1,198,296 |
| DBMC | 298,551 | 12,713 | 270,148 | 12,026 | 1,333,558 | 15,596 | 323,601 | 20,071 | 2,286,264 |
| DSCF | 242,145 | 2,690 | 185,772 | 1,227 | 3,086,682 | 44,892 | 141,760 | - | 3,705,169 |
| DDU | 3,769 | - | 36,726 | 81 | 1,011,854 | - | 149,052 | - | 1,201,480 |
| | | | | | | | | | 9,454,429 |

| | Pieces | Weight |
|---|---|---|
| RPW | 69,146,141 | 9,454,429 |
| Permit | 67,387,141 | 8,763,266 |
| Adj factor | 102.610% | 107.887% |

Pieces (Thousands)

| Entry Type | Trays on Pallets | | Loose Trays | | Bundles or Sacks on Pallets | | Loose Sacks | | |
|---|---|---|---|---|---|---|---|---|---|
| | DS | PL | DS | PL | DS | PL | DS | PL | Total |
| ODU | 27,937 | - | 1,747,927 | 645,175 | 136 | 20,850 | 543,327 | 27,819 | 3,013,172 |
| OSCF | 301,680 | 54,731 | 4,888,371 | 92,541 | 966,423 | 55,222 | 1,136,723 | 69,220 | 7,564,910 |
| OBMC | 1,508,785 | 1,928,634 | 630,071 | 4,180,295 | 184,660 | 1,070,686 | 148,477 | 1,711,638 | 11,363,246 |
| DBMC | 6,051,150 | 200,010 | 2,632,126 | 188,906 | 5,885,627 | 70,632 | 1,529,728 | 75,146 | 16,633,325 |
| DSCF | 5,044,530 | 57,701 | 3,064,033 | 88,025 | 13,243,279 | 434,340 | 702,364 | - | 22,634,271 |
| DDU | 228,712 | - | 630,699 | 1,430 | 4,594,016 | - | 723,360 | - | 6,178,216 |
| | | | | | | | | | 67,387,141 |

Weight (Thousands)

| Entry Type | Trays on Pallets | | Loose Trays | | Bundles or Sacks on Pallets | | Loose Sacks | | |
|---|---|---|---|---|---|---|---|---|---|
| | DS | PL | DS | PL | DS | PL | DS | PL | Total |
| ODU | 1,113 | - | 79,758 | 36,957 | 18 | 1,810 | 191,333 | 2,324 | 313,313 |
| OSCF | 10,703 | 2,328 | 209,168 | 2,554 | 157,758 | 5,742 | 264,422 | 19,506 | 672,181 |
| OBMC | 65,350 | 80,916 | 16,730 | 289,698 | 35,640 | 294,875 | 6,795 | 320,691 | 1,110,695 |
| DBMC | 276,726 | 11,783 | 250,399 | 11,147 | 1,236,069 | 14,456 | 299,944 | 18,604 | 2,119,128 |
| DSCF | 224,443 | 2,494 | 172,191 | 1,137 | 2,861,031 | 41,610 | 131,397 | - | 3,434,304 |
| DDU | 3,493 | - | 34,041 | 75 | 937,882 | - | 138,155 | - | 1,113,647 |
| | | | | | | | | | 8,763,266 |

Source: USPS LR-I-102, Table 19.

Attachment F, Table 4.2
Mail Entry Profile
Standard Mail (A) Nonprofit Rate

Pieces (Thousands)

| Entry Type | Trays on Pallets | | Loose Trays | | Bundles or Sacks on Pallets | | Loose Sacks | | |
|---|---|---|---|---|---|---|---|---|---|
| | DS | PL | DS | PL | DS | PL | DS | PL | Total |
| ODU | 166,097 | - | 622,465 | 74,137 | - | - | 54,821 | - | 917,521 |
| OSCF | 66,999 | 2,068 | 2,282,060 | 265,759 | 37,842 | - | 525,709 | 48,477 | 3,228,916 |
| OBMC | - | 283,442 | 465,135 | 2,133,988 | 34,941 | 92,027 | 252,561 | 263,504 | 3,525,599 |
| DBMC | 1,178,864 | 33,643 | 670,553 | 107,431 | 187,549 | 10,356 | 233,635 | 15,354 | 2,437,383 |
| DSCF | 115,594 | - | 1,894,932 | 29,969 | 231,731 | - | 410,978 | 1,414 | 2,684,617 |
| DDU | - | - | 307,219 | - | - | - | 110,469 | - | 417,688 |
| | | | | | | | | | 13,211,724 |

Weight (Thousands)

| Entry Type | Trays on Pallets | | Loose Trays | | Bundles or Sacks on Pallets | | Loose Sacks | | |
|---|---|---|---|---|---|---|---|---|---|
| | DS | PL | DS | PL | DS | PL | DS | PL | Total |
| ODU | 6,878 | - | 24,957 | 3,704 | - | - | 4,288 | - | 39,827 |
| OSCF | 3,403 | 95 | 112,448 | 13,337 | 2,708 | - | 102,524 | 10,710 | 245,225 |
| OBMC | - | 13,949 | 19,914 | 112,729 | 6,753 | 14,200 | 48,451 | 27,689 | 243,686 |
| DBMC | 46,969 | 2,108 | 43,782 | 6,359 | 40,115 | 3,311 | 16,012 | 1,555 | 160,212 |
| DSCF | 9,832 | - | 71,269 | 757 | 28,672 | - | 68,387 | 159 | 179,075 |
| DDU | - | - | 12,985 | - | - | - | 13,315 | - | 26,299 |
| | | | | | | | | | 894,324 |

| | | |
|---|---|---|
| RPW | 13,211,724 | 894,324 |
| Permit | 13,275,871 | 890,907 |
| Adj. Factor | 99.517% | 100.384% |

Pieces (Thousands)

| Entry Type | Trays on Pallets | | Loose Trays | | Bundles or Sacks on Pallets | | Loose Sacks | | |
|---|---|---|---|---|---|---|---|---|---|
| | DS | PL | DS | PL | DS | PL | DS | PL | Total |
| ODU | 166,903 | - | 625,487 | 74,497 | - | - | 55,088 | - | 921,976 |
| OSCF | 67,324 | 2,078 | 2,293,141 | 267,049 | 38,026 | - | 528,262 | 48,712 | 3,244,593 |
| OBMC | - | 284,818 | 467,393 | 2,144,350 | 35,111 | 92,474 | 253,787 | 264,784 | 3,542,717 |
| DBMC | 1,184,588 | 33,807 | 673,808 | 107,953 | 188,459 | 10,406 | 234,769 | 15,428 | 2,449,217 |
| DSCF | 116,155 | - | 1,904,132 | 30,115 | 232,856 | - | 412,974 | 1,421 | 2,697,652 |
| DDU | - | - | 308,711 | - | - | - | 111,005 | - | 419,716 |
| | | | | | | | | | 13,275,871 |

Weight (Thousands)

| Entry Type | Trays on Pallets | | Loose Trays | | Bundles or Sacks on Pallets | | Loose Sacks | | |
|---|---|---|---|---|---|---|---|---|---|
| | DS | PL | DS | PL | DS | PL | DS | PL | Total |
| ODU | 6,851 | - | 24,861 | 3,690 | - | - | 4,272 | - | 39,674 |
| OSCF | 3,390 | 95 | 112,018 | 13,286 | 2,697 | - | 102,132 | 10,669 | 244,288 |
| OBMC | - | 13,896 | 19,838 | 112,299 | 6,727 | 14,146 | 48,266 | 27,583 | 242,755 |
| DBMC | 46,790 | 2,100 | 43,615 | 6,335 | 39,962 | 3,298 | 15,951 | 1,549 | 159,600 |
| DSCF | 9,794 | - | 70,997 | 754 | 28,562 | - | 68,125 | 158 | 178,391 |
| DDU | - | - | 12,935 | - | - | - | 13,264 | - | 26,199 |
| | | | | | | | | | 890,907 |

Source: USPS LR-I-102, Table 20.

Attachment F, Table 4.3

**Mail Entry Profile**

**Bulk Standard Mail (A)**

## Pieces (Thousands)

| Entry Type | Trays on Pallets | | Loose Trays | | Bundles or Sacks on Pallets | | Loose Sacks | | |
|---|---|---|---|---|---|---|---|---|---|
| | DS | PL | DS | PL | DS | PL | DS | PL | Total |
| ODU | 194,763 | - | 2,416,018 | 736,154 | 140 | 21,394 | 612,331 | 28,545 | 4,009,346 |
| OSCF | 376,554 | 58,228 | 7,298,032 | 360,715 | 1,029,492 | 56,663 | 1,692,105 | 119,503 | 10,991,292 |
| OBMC | 1,548,169 | 2,262,419 | 1,111,653 | 6,423,402 | 224,421 | 1,190,661 | 404,914 | 2,019,821 | 15,185,458 |
| DBMC | 7,387,966 | 238,874 | 3,371,385 | 301,268 | 6,226,808 | 82,831 | 1,803,293 | 92,461 | 19,504,887 |
| DSCF | 5,291,801 | 59,207 | 5,038,945 | 120,292 | 13,820,697 | 445,677 | 1,131,675 | 1,414 | 25,909,709 |
| DDU | 234,682 | - | 954,381 | 1,467 | 4,713,933 | - | 852,710 | - | 6,757,173 |
| | | | | | | | | | 82,357,865 |

## Weight (Thousands)

| Entry Type | Trays on Pallets | | Loose Trays | | Bundles or Sacks on Pallets | | Loose Sacks | | |
|---|---|---|---|---|---|---|---|---|---|
| | DS | PL | DS | PL | DS | PL | DS | PL | Total |
| ODU | 8,078 | - | 111,005 | 43,576 | 20 | 1,953 | 210,711 | 2,508 | 377,851 |
| OSCF | 14,950 | 2,606 | 338,113 | 16,092 | 172,908 | 6,195 | 387,801 | 31,755 | 970,421 |
| OBMC | 70,504 | 101,247 | 37,964 | 425,276 | 45,204 | 332,333 | 55,781 | 373,673 | 1,441,982 |
| DBMC | 345,521 | 14,821 | 313,930 | 18,386 | 1,373,674 | 18,907 | 339,613 | 21,626 | 2,446,476 |
| DSCF | 251,977 | 2,690 | 257,041 | 1,984 | 3,115,354 | 44,892 | 210,147 | 159 | 3,884,244 |
| DDU | 3,769 | - | 49,710 | 81 | 1,011,854 | - | 162,366 | - | 1,227,780 |
| | | | | | | | | | 10,348,753 |

Source: Table 4.1 + Table 4.2

**Attachment F - Table 5**
**Standard Mail (A) Commercial**
**Pieces and Weight by Entry Discount**
**GFY 1998**

| Entry Discount | Shape | Pieces(000) | Weight(000) | Weight per Piece (oz.) |
|---|---|---|---|---|
| None | Letters | 16,586,359.05 | 825,605.68 | 0.8 |
| | Flats | 6,532,703.60 | 1,380,760.86 | 3.4 |
| | Parcels | 608,448.51 | 319,672.92 | 8.4 |
| DBMC | Letters | 8,764,152.52 | 536,257.91 | 1.0 |
| | Flats | 7,487,128.10 | 1,560,077.10 | 3.3 |
| | Parcels | 155,370.94 | 98,592.74 | 10.2 |
| DSCF | Letters | 8,282,904.86 | 412,543.97 | 0.8 |
| | Flats | 14,266,897.10 | 3,106,858.12 | 3.5 |
| | Parcels | 85,487.73 | 38,519.80 | 7.2 |
| DDU | Letters | 885,791.85 | 39,554.55 | 0.7 |
| | Flats | 5,480,528.19 | 1,133,948.22 | 3.3 |
| | Parcels | 10,368.52 | 2,036.39 | 3.1 |
| Total | Letters | 34,519,208.28 | 1,813,962.11 | 0.8 |
| | Flats | 33,767,256.99 | 7,181,644.30 | 3.4 |
| | Parcels | 859,675.70 | 458,821.85 | 8.5 |
| | | 69,146,141 | 9,454,428 | |

Source: LR-I-102, Table 15

**Attachment F - Table 5**
**Standard Mail (A) Nonprofit**
**Pieces and Weight by Entry Discount**
**GFY 1998**

| Entry Discount | Shape | Pieces | Weight | Weight per Piece (oz.) |
|---|---|---|---|---|
| None | Letters | 6,488,481.77 | 313,934.35 | 0.8 |
| | Flats | 1,329,902.40 | 217,835.13 | 2.6 |
| | Parcels | 40,642.37 | 14,853.00 | 5.8 |
| DBMC | Letters | 1,843,198.15 | 89,066.66 | 0.8 |
| | Flats | 422,244.83 | 55,249.60 | 2.1 |
| | Parcels | 755.96 | 315.05 | 6.7 |
| DSCF | Letters | 2,010,911.94 | 79,875.59 | 0.6 |
| | Flats | 647,355.93 | 95,931.80 | 2.4 |
| | Parcels | 2,488.18 | 891.28 | 5.7 |
| DDU | Letters | 312,755.41 | 12,928.39 | 0.7 |
| | Flats | 112,459.88 | 13,257.23 | 1.9 |
| | Parcels | 527.26 | 185.78 | 5.6 |
| Total | Letters | 10,655,347.27 | 495,805.00 | 0.7 |
| | Flats | 2,511,963.05 | 382,273.75 | 2.4 |
| | Parcels | 44,413.76 | 16,245.11 | 5.9 |
| | | 13,211,724 | 894,324 | |

Source: LR-I-102, Table 18

## Attachment F, TABLE 6.1

FY 1998 STANDARD MAIL (A) BULK COMMERCIAL RATE

**LETTERS**

| | | |
|---|---|---|
| Regular | Revenue per Piece | 0.18 |
| | Cost per Piece | 0.11 |
| | Contribution per Piece | 0.07 |
| ECR | Revenue per Piece | 0.13 |
| | Cost per Piece | 0.06 |
| | Contribution per Piece | 0.07 |

**FLATS**

| | | |
|---|---|---|
| Regular | Revenue per Piece | 0.23 |
| | Cost per Piece | 0.21 |
| | Contribution per Piece | 0.03 |
| ECR | Revenue per Piece | 0.15 |
| | Cost per Piece | 0.07 |
| | Contribution per Piece | 0.09 |

**IPPS AND PARCELS**

| | | |
|---|---|---|
| Regular | Revenue per Piece | 0.48 |
| | Cost per Piece | 0.77 |
| | Contribution per Piece | (0.29) |
| ECR | Revenue per Piece | 0.16 |
| | Cost per Piece | 0.75 |
| | Contribution per Piece | (0.59) |

**ALL SHAPES**

| | | |
|---|---|---|
| Regular | Revenue per Piece | 0.21 |
| | Cost per Piece | 0.16 |
| | Contribution per Piece | 0.05 |
| ECR | Revenue per Piece | 0.15 |
| | Cost per Piece | 0.07 |
| | Contribution per Piece | 0.08 |

**Source: Attachment F, Tables 1, 3.1 - 3.2**

**Attachment F, TABLE 6.2**

FY 1998 STANDARD MAIL (A) BULK NONPROFIT RATE

**LETTERS**

| | | |
|---|---|---|
| Nonprofit | Revenue per Piece | 0.10 |
| | Cost per Piece | 0.09 |
| | Contribution per Piece | 0.01 |
| NP ECR | Revenue per Piece | 0.07 |
| | Cost per Piece | 0.06 |
| | Contribution per Piece | 0.02 |

**FLATS**

| | | |
|---|---|---|
| Nonprofit | Revenue per Piece | 0.15 |
| | Cost per Piece | 0.20 |
| | Contribution per Piece | (0.04) |
| NP ECR | Revenue per Piece | 0.10 |
| | Cost per Piece | 0.08 |
| | Contribution per Piece | 0.02 |

**IPPS AND PARCELS**

| | | |
|---|---|---|
| Nonprofit | Revenue per Piece | 0.26 |
| | Cost per Piece | 0.98 |
| | Contribution per Piece | (0.73) |
| NP ECR | Revenue per Piece | 0.15 |
| | Cost per Piece | 2.26 |
| | Contribution per Piece | (2.12) |

**ALL SHAPES**

| | | |
|---|---|---|
| Nonprofit | Revenue per Piece | 0.11 |
| | Cost per Piece | 0.11 |
| | Contribution per Piece | 0.00 |
| NP ECR | Revenue per Piece | 0.08 |
| | Cost per Piece | 0.06 |
| | Contribution per Piece | 0.02 |

**Source: Attachment F, Tables 2, 3.3 - 3.4**

## Attachment F, TABLE 6.3

Commercial and Non-Profit Combined

**IPPS AND PARCELS**

| | | |
|---|---|---|
| Other | Revenue per Piece | 0.47 |
| | Cost per Piece | 0.78 |
| | Contribution per Piece | (0.31) |
| Carrier Route | Revenue per Piece | 0.16 |
| | Cost per Piece | 0.80 |
| | Contribution per Piece | (0.65) |

**Source: Attachment F, Tables 1-2, 3.5 - 3.6**

**ATTACHMENT G**

Mail Processing Costs Avoided By
Carrier Route Presorted Bound Printed Matter

$28.244 per hour (wage rate)[1] / 433 pieces per hour (productivity)[2] = $0.065

$.065 per piece * 93.2% (volume variability)[3] = $0.061

$28.244 per hour / 4090 pieces per hour (productivity)[4] = $0.007

$.007 per piece * 93.2% = $.007

$.061 - $.007 = $.054

$.054 * ((.961 [6] - 1) + 1.461 [5]) = $0.077

**Total test year carrier route presort savings = 7.7 cents.**

1. Test Year 2001 wage rate. LR-I-106 (Part VIII, Table VIII).
2. Incoming secondary sorting productivity for getting BPM pieces from 5-digit to carrier route at delivery units or similar facilities. Docket No. R84-1, USPS-T-16.
3. LDC 43 implicit volume variability - to be consistent with Docket No. R2000-1 USPS presentation.
4. Bundle sorting productivity. Carrier route presorted Bound Printed Matter will incur the added cost of being sorted as a destinating bundle at the post office before reaching the carrier.
A new bundle study shows this productivity to be 409 pieces per hour (LR-I-88, Manprod.xls/scheme-IS productivity).
I continue to use witness Madison's 10 pieces per bundle resulting in a productivity of 4090 pieces per hour.
5. Test Year 2001 NONMODS manual parcel sorting piggyback factor - USPS-T-21, Attachment 15.
6. Test Year 2001 Premium Pay Factor - USPS-T-21, Attachment 15.

## Attachment H, Table 1

**BOUND PRINTED MATTER SURVEY RESULTS: VOLUMES BY ENTRY PROFILE AND ZONE DISTRIBUTION**
**MAIL PROCESSING VERSION**

| | |
|---|---|
| Container Type | (All) |
| Presort Rate | (All) |
| Entry Practice | (All) |

| Sum of Total Pieces | Zones: | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Entry Profile: | Local | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Grand Total | |
| DDU | 32,838,871 | 139,688 | | | | | | | | 32,978,559 | 7.17% |
| DDU - Destinating 3-Digit ZIP Area | 3,221,991 | 2,505,271 | | 1,712 | | | | | | 5,728,974 | 1.25% |
| DDU - Destinating BMC Service Area | 285,953 | 1,166,514 | 1,484,277 | 17,190 | 6,944 | | | | | 2,960,877 | 0.64% |
| Origin AO | | | 307,176 | 495,750 | 3,059,176 | 394,644 | 909,244 | 188,236 | 157,974 | 5,512,200 | 1.20% |
| Destinating SCF | 29,278,164 | 41,497,339 | 873,476 | | | | | | | 71,648,980 | 15.58% |
| SCF - BMC Service Area | 148 | 1,530,602 | 3,598,923 | 851,759 | 5,491 | | | | | 5,986,923 | 1.30% |
| Origin SCF | | 28,224 | 548,335 | 1,607,993 | 5,534,580 | 2,853,733 | 4,462,458 | 2,262,344 | 663,205 | 17,960,871 | 3.91% |
| Destinating BMC | 1,319,997 | 98,567,584 | 66,569,343 | 29,565,508 | 8,655,097 | 140,680 | | | | 204,818,209 | 44.55% |
| Origin BMC | | 1,294,717 | 7,207,245 | 17,265,962 | 37,323,596 | 31,813,544 | 5,490,966 | 5,071,381 | 5,006,390 | 110,473,801 | 24.03% |
| Destinating ASF | | 327,020 | 716,300 | 486,521 | 54,285 | | | | | 1,584,126 | 0.34% |
| Origin ASF | | | 252 | 25,237 | 51,331 | 32,391 | 9,089 | 2,413 | 18,396 | 139,108 | 0.03% |
| Grand Total | 66,945,124 | 147,056,958 | 81,305,327 | 50,317,631 | 54,690,499 | 35,234,991 | 10,871,757 | 7,524,375 | 5,845,965 | 459,792,628 | 100.00% |

| Entry Profile Distribution by Zone | Zones: | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Entry Profile: | Local | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Grand Total |
| DDU | 49.1% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 7.2% |
| DDU - Destinating 3-Digit ZIP Area | 4.8% | 1.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1.2% |
| DDU - Destinating BMC Service Area | 0.4% | 0.8% | 1.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.6% |
| Origin AO | 0.0% | 0.0% | 0.4% | 1.0% | 5.6% | 1.1% | 8.4% | 2.5% | 2.7% | 1.2% |
| Destinating SCF | 43.7% | 28.2% | 1.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 15.6% |
| SCF - BMC Service Area | 0.0% | 1.0% | 4.4% | 1.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1.3% |
| Origin SCF | 0.0% | 0.0% | 0.7% | 3.2% | 10.1% | 8.1% | 41.0% | 30.1% | 11.3% | 3.9% |
| Destinating BMC | 2.0% | 67.0% | 81.9% | 58.8% | 15.8% | 0.4% | 0.0% | 0.0% | 0.0% | 44.5% |
| Origing BMC | 0.0% | 0.9% | 8.9% | 34.3% | 68.2% | 90.3% | 50.5% | 67.4% | 85.6% | 24.0% |
| Destinating ASF | 0.0% | 0.2% | 0.9% | 1.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.3% |
| Origin ASF | 0.0% | 0.0% | 0.0% | 0.1% | 0.1% | 0.1% | 0.1% | 0.0% | 0.3% | 0.0% |
| Grand Total | 66,945,124 | 147,056,958 | 81,305,327 | 50,317,631 | 54,690,499 | 35,234,991 | 10,871,757 | 7,524,375 | 5,845,965 | 459,792,628 |

| Zone Distribution by Entry Type | Zones: | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Entry Profile: | Local | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Grand Total |
| DDU | 99.6% | 0.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 32,978,559 |
| DDU - Destinating 3-Digit ZIP Area | 56.2% | 43.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 5,728,974 |
| DDU - Destinating BMC Service Area | 9.7% | 39.4% | 50.1% | 0.6% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 2,960,877 |
| Origin AO | 0.0% | 0.0% | 5.6% | 9.0% | 55.5% | 7.2% | 16.5% | 3.4% | 2.9% | 5,512,200 |
| Destinating SCF | 40.9% | 57.9% | 1.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 71,648,980 |
| SCF - BMC Service Area | 0.0% | 25.6% | 60.1% | 14.2% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 5,986,923 |
| Origin SCF | 0.0% | 0.2% | 3.1% | 9.0% | 30.8% | 15.9% | 24.8% | 12.6% | 3.7% | 17,960,871 |
| Destinating BMC | 0.6% | 48.1% | 32.5% | 14.4% | 4.2% | 0.1% | 0.0% | 0.0% | 0.0% | 204,818,209 |
| Origing BMC | 0.0% | 1.2% | 6.5% | 15.6% | 33.8% | 28.8% | 5.0% | 4.6% | 4.5% | 110,473,801 |
| Destinating ASF | 0.0% | 20.6% | 45.2% | 30.7% | 3.4% | 0.0% | 0.0% | 0.0% | 0.0% | 1,584,126 |
| Origin ASF | 0.0% | 0.0% | 0.2% | 18.1% | 36.9% | 23.3% | 6.5% | 1.7% | 13.2% | 139,108 |
| Grand Total | 14.6% | 32.0% | 17.7% | 10.9% | 11.9% | 7.7% | 2.4% | 1.6% | 1.3% | 459,792,628 |

| Container Types: | | |
|---|---|---|
| 1=MBMC Pallets | 6=MADC Sacks | 11=5-D CR Sacks |
| 2=BMC Pallets | 7=ADC Sacks | 12=CR Sacks |
| 3=SCF Pallets | 8=SCF Sacks | 13=BMC Sacks |
| 4=3-Digit Pallets | 9=3-Digit Sacks | 14=Bedloaded Bundles |
| 5=5-Digit Pallets | 10=5-Digit Sacks | |

| Presort Rate: |
|---|
| 1=Basic Packages |
| 2=Carrier Route Packages |
| 3=Machinable Parcels |

| Entry Practice: | |
|---|---|
| 1=BMEU Entry | 3=Plant Verified Drop Shipment |
| 2=BMEU Verified Drop Shipment | 4=Plant Load |

Source: LR-I-109, BPM Mail Characteristics Study, page 26

**Attachment H, Table 2**
**BOUND PRINTED MATTER SURVEY RESULTS: VOLUMES BY ENTRY PROFILE AND ZONE DISTRIBUTION**
**TRANSPORTATION VERSION**

| | |
|---|---|
| Container Type | (All) |
| Presort Rate | (All) |
| Entry Practice | (All) |
| CR | (All) |

| Sum of Pieces2 | Zone: | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Entry Profile: | Local | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Grand Total |
| DDU | 32,916,229 | 139,688 | 10 | 20 | | | | | | 33,055,947 |
| DDU - Destinating 3-Digit ZIP Area | 3,221,991 | 2,752,929 | 30 | 1,712 | | | | | | 5,976,662 |
| DDU - Destinating BMC Service Area | 285,953 | 2,854,121 | 3,793,285 | 403,578 | 50,036 | 13,934 | | | | 7,400,906 |
| Origin AO | | 1,072,277 | 4,417,711 | 8,331,698 | 31,020,172 | 22,369,456 | 2,162,310 | 2,491,127 | 1,951,257 | 73,816,007 |
| SCF | 29,733,340 | 43,810,700 | 880,202 | | | | | | | 74,424,242 |
| SCF - Destinating BMC Service Area | 148 | 6,305,088 | 7,889,265 | 4,273,346 | 902,601 | 5,001 | | | | 19,375,449 |
| Origin SCF | | 40,279 | 2,794,213 | 6,985,342 | 10,067,456 | 11,474,830 | 8,545,111 | 4,002,710 | 2,464,894 | 46,374,835 |
| Destinating BMC | 787,464 | 89,544,472 | 59,963,227 | 25,757,512 | 7,714,895 | 121,745 | | | | 183,889,315 |
| Origin BMC | | 210,384 | 850,832 | 4,052,666 | 4,829,723 | 1,217,634 | 155,248 | 1,028,125 | 1,411,419 | 13,756,030 |
| Destinating ASF | | 327,020 | 716,300 | 486,521 | 54,285 | | | | | 1,584,126 |
| Origin ASF | | | 252 | 25,237 | 51,331 | 32,391 | 9,089 | 2,413 | 18,396 | 139,108 |
| Grand Total | 66,945,123 | 147,056,958 | 81,305,327 | 50,317,631 | 54,690,499 | 35,234,991 | 10,871,757 | 7,524,375 | 5,845,965 | 459,792,628 |

| Entry Profile Distribution by Zone | Zones: | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Entry Profile: | Local | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Grand Total |
| DDU | 49.2% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 7.2% |
| DDU - Destinating 3-Digit ZIP Area | 4.8% | 1.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1.3% |
| DDU - Destinating BMC Service Area | 0.4% | 1.9% | 4.7% | 0.8% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 1.6% |
| Origin AO | 0.0% | 0.7% | 5.4% | 16.6% | 56.7% | 63.5% | 19.9% | 33.1% | 33.4% | 16.1% |
| Destinating SCF | 44.4% | 29.8% | 1.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 16.2% |
| SCF - BMC Service Area | 0.0% | 4.3% | 9.7% | 8.5% | 1.7% | 0.0% | 0.0% | 0.0% | 0.0% | 4.2% |
| Origin SCF | 0.0% | 0.0% | 3.4% | 13.9% | 18.4% | 32.6% | 78.6% | 53.2% | 42.2% | 10.1% |
| Destinating BMC | 1.2% | 60.9% | 73.8% | 51.2% | 14.1% | 0.3% | 0.0% | 0.0% | 0.0% | 40.0% |
| Origing BMC | 0.0% | 0.1% | 1.0% | 8.1% | 8.8% | 3.5% | 1.4% | 13.7% | 24.1% | 3.0% |
| Destinating ASF | 0.0% | 0.2% | 0.9% | 1.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.3% |
| Origin ASF | 0.0% | 0.0% | 0.0% | 0.1% | 0.1% | 0.1% | 0.1% | 0.0% | 0.3% | 0.0% |
| Grand Total | 66,945,123 | 147,056,958 | 81,305,327 | 50,317,631 | 54,690,499 | 35,234,991 | 10,871,757 | 7,524,375 | 5,845,965 | 459,792,628 |

| Zone Distribution by Entry Type | Zones: | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Entry Profile: | Local | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Grand Total |
| DDU | 99.6% | 0.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 33,055,947 |
| DDU - Destinating 3-Digit ZIP Area | 53.9% | 46.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 5,976,662 |
| DDU - Destinating BMC Service Area | 3.9% | 38.6% | 51.3% | 5.5% | 0.7% | 0.2% | 0.0% | 0.0% | 0.0% | 7,400,906 |
| Origin AO | 0.0% | 1.5% | 6.0% | 11.3% | 42.0% | 30.3% | 2.9% | 3.4% | 2.6% | 73,816,007 |
| Destinating SCF | 40.0% | 58.9% | 1.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 74,424,242 |
| SCF - BMC Service Area | 0.0% | 32.5% | 40.7% | 22.1% | 4.7% | 0.0% | 0.0% | 0.0% | 0.0% | 19,375,449 |
| Origin SCF | 0.0% | 0.1% | 6.0% | 15.1% | 21.7% | 24.7% | 18.4% | 8.6% | 5.3% | 46,374,835 |
| Destinating BMC | 0.4% | 48.7% | 32.6% | 14.0% | 4.2% | 0.1% | 0.0% | 0.0% | 0.0% | 183,889,315 |
| Origing BMC | 0.0% | 1.5% | 6.2% | 29.5% | 35.1% | 8.9% | 1.1% | 7.5% | 10.3% | 13,756,030 |
| Destinating ASF | 0.0% | 20.6% | 45.2% | 30.7% | 3.4% | 0.0% | 0.0% | 0.0% | 0.0% | 1,584,126 |
| Origin ASF | 0.0% | 0.0% | 0.2% | 18.1% | 36.9% | 23.3% | 6.5% | 1.7% | 13.2% | 139,108 |
| Grand Total | 14.6% | 32.0% | 17.7% | 10.9% | 11.9% | 7.7% | 2.4% | 1.6% | 1.3% | 459,792,628 |

| Container Types: | | |
|---|---|---|
| 1=MBMC Pallets | 6=MADC Sacks | 11=5-D CR Sacks |
| 2=BMC Pallets | 7=ADC Sacks | 12=CR Sacks |
| 3=SCF Pallets | 8=SCF Sacks | 13=BMC Sacks |
| 4=3-Digit Pallets | 9=3-Digit Sacks | 14=Bedloaded Bundles |
| 5=5-Digit Pallets | 10=5-Digit Sacks | |

| Presort Rate: |
|---|
| 1=Basic Packages |
| 2=Carrier Route Packages |
| 3=Machinable Parcels |

| Entry Practice: | |
|---|---|
| 1=BMEU Entry | 3=Plant Verified Drop Shipment |
| 2=BMEU Verified Drop Shipment | 4=Plant Load |

Source: 9, BPM Mail Characteristics Study, page 11

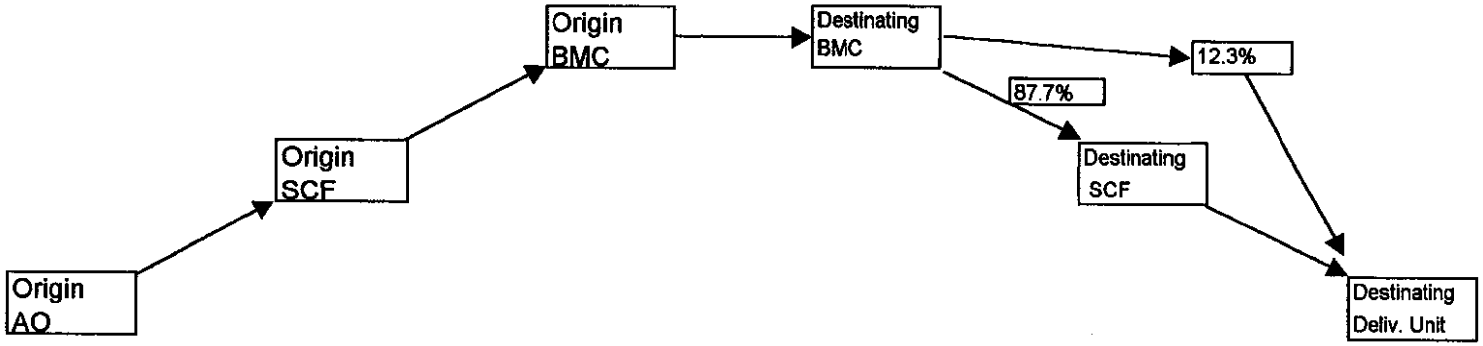
**Appendix H, Table 2.1**
**BOUND PRINTED MATTER SURVEY RESULTS: VOLUMES BY ENTRY PROFILE AND ZONE DISTRIBUTION**
**TRANSPORTATION VERSION**

| | |
|---|---|
| Container Type | (All) |
| Presort Rate | (All) |
| Entry Practice | (All) |
| CR | (All) |

| Sum of Pieces2 | Zone: | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Entry Profile: | Local | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Grand Total |
| DDU | 32,916,229 | 139,688 | 10 | 20 | | | | | | 33,055,947 |
| DDU - Destinating 3-Digit ZIP Area | 3,221,991 | 2,752,929 | 30 | 1,712 | | | | | | 5,976,662 |
| DDU - Destinating BMC Service Area | 285,953 | 2,854,121 | 3,793,285 | 403,578 | 50,036 | 13,934 | | | | 7,400,906 |
| Origin AO | | 1,072,277 | 4,417,711 | 8,331,698 | 31,020,172 | 22,369,456 | 2,162,310 | 2,491,127 | 1,951,257 | 73,816,007 |
| SCF | 29,733,340 | 43,810,700 | 880,202 | | | | | | | 74,424,242 |
| SCF - Destinating BMC Service Area | 148 | 6,305,088 | 7,889,265 | 4,273,346 | 902,601 | 5,001 | | | | 19,375,449 |
| Origin SCF | | 40,279 | 2,794,213 | 6,985,342 | 10,067,456 | 11,474,830 | 8,545,111 | 4,002,710 | 2,464,894 | 46,374,835 |
| Destinating BMC | 787,464 | 89,544,472 | 59,963,227 | 25,757,512 | 7,714,695 | 121,745 | | | | 183,889,315 |
| Origin BMC | | 210,384 | 850,832 | 4,052,666 | 4,829,723 | 1,217,634 | 155,248 | 1,028,125 | 1,411,419 | 13,756,030 |
| Destinating ASF | | 327,020 | 716,300 | 486,521 | 54,285 | | | | | 1,584,126 |
| Origin ASF | | | 252 | 25,237 | 51,331 | 32,391 | 9,089 | 2,413 | 18,396 | 139,108 |
| Grand Total | 66,945,123 | 147,056,958 | 81,305,327 | 50,317,631 | 54,690,499 | 35,234,991 | 10,871,757 | 7,524,375 | 5,845,965 | 459,792,628 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
| DDU | | | | | | | | | | - |
| DDU - SCF area | 3,221,991 | 2,752,929 | 30 | 1,712 | - | - | - | - | - | 5,976,662 |
| DDU- BMC area | 285,953 | 2,854,121 | 3,793,285 | 403,578 | 50,036 | 13,934 | - | - | - | 7,400,906 |
| OAO | - | 1,072,277 | 4,417,711 | 8,331,698 | 31,020,172 | 22,369,456 | 2,162,310 | 2,491,127 | 1,951,257 | 73,816,007 |
| DSCF | | | | | | | | | | - |
| SCF - BMC area | 148 | 6,305,088 | 7,889,265 | 4,273,346 | 902,601 | 5,001 | - | - | - | 19,375,449 |
| OSCF | - | 40,279 | 2,794,213 | 6,985,342 | 10,067,456 | 11,474,830 | 8,545,111 | 4,002,710 | 2,464,894 | 46,374,835 |
| DBMC | | | | | | | | | | - |
| OBMC | - | 210,384 | 850,832 | 4,052,666 | 4,829,723 | 1,217,634 | 155,248 | 1,028,125 | 1,411,419 | 13,756,030 |
| DASF | - | 327,020 | 716,300 | 486,521 | 54,285 | - | - | - | - | 1,584,126 |
| OASF | - | - | 252 | 25,237 | 51,331 | 32,391 | 9,089 | 2,413 | 18,396 | 139,108 |
| | 3,508,092 | 13,562,098 | 20,461,888 | 24,560,099 | 46,975,604 | 35,113,246 | 10,871,757 | 7,524,375 | 5,845,965 | 168,423,124 |
| | 2.08% | 8.05% | 12.15% | 14.58% | 27.89% | 20.85% | 6.46% | 4.47% | 3.47% | |
| | | 22.28% | | | | | | | | |

Attachment H, Table 3
Simplified Standard Mail (B) Mailflow



## Attachment I, Table 1

**Development of BY98 Standard (B) Bound Printed Matter Mail Processing Costs by Basic Function**

| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Direct Tally IOCS Costs by Basic Function | | | | | Percent of Total | | | | BY98 Variable Mail Proc. Costs | Variable Costs Distributed to Basic Function | | | | |
| | Group | Pool | Outgoing | Incoming | Transit | Other | Total | =(1)/(5) Outgoing | =(2)/(5) Incoming | =(3)/(5) Transit | =(4)/(5) Other | | =(6)*(10) Outgoing | =(7)*(10) Incoming | =(8)*(10) Transit | =(9)*(10) Other | If (5) = 0 then (10) No Key |
| 1 | mods | bcs | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 20 | No Key | No Key | No Key | No Key | 20 |
| 2 | mods | ocr | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 9 | No Key | No Key | No Key | No Key | 9 |
| 3 | mods | fsm | 992 | 1,309 | 0 | 0 | 2,300 | 0.431 | 0.569 | 0.000 | 0.000 | 5,375 | 2,317 | 3,058 | 0 | 0 | |
| 4 | mods | lsm | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 1 | No Key | No Key | No Key | No Key | 1 |
| 5 | mods | 1SackS_m | 0 | 151 | 0 | 0 | 151 | 0.000 | 1.000 | 0.000 | 0.000 | 837 | 0 | 837 | 0 | 0 | |
| 6 | mods | mecparc | 0 | 150 | 0 | 0 | 150 | 0.000 | 1.000 | 0.000 | 0.000 | 322 | 0 | 322 | 0 | 0 | |
| 7 | mods | spbs Oth | 798 | 1,236 | 0 | 0 | 2,033 | 0.392 | 0.608 | 0.000 | 0.000 | 5,615 | 2,203 | 3,412 | 0 | 0 | |
| 8 | mods | spbsPrio | 0 | 46 | 0 | 0 | 46 | 0.000 | 1.000 | 0.000 | 0.000 | 147 | 0 | 147 | 0 | 0 | |
| 9 | mods | manf | 265 | 942 | 0 | 0 | 1,207 | 0.219 | 0.781 | 0.000 | 0.000 | 2,225 | 488 | 1,737 | 0 | 0 | |
| 10 | mods | mani | 0 | 393 | 72 | 0 | 465 | 0.000 | 0.845 | 0.155 | 0.000 | 801 | 0 | 676 | 124 | 0 | |
| 11 | mods | manp | 1,047 | 646 | 0 | 0 | 1,693 | 0.618 | 0.382 | 0.000 | 0.000 | 2,572 | 1,591 | 982 | 0 | 0 | |
| 12 | mods | Priority | 59 | 52 | 0 | 0 | 111 | 0.535 | 0.465 | 0.000 | 0.000 | 238 | 127 | 111 | 0 | 0 | |
| 13 | mods | Id15 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | No Key | No Key | No Key | No Key | 0 |
| 14 | mods | 1bulk pr | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 54 | No Key | No Key | No Key | No Key | 54 |
| 15 | mods | 1cancMPP | 6 | 56 | 0 | 0 | 62 | 0.095 | 0.905 | 0.000 | 0.000 | 257 | 24 | 232 | 0 | 0 | |
| 16 | mods | 1OpBulk | 363 | 659 | 0 | 0 | 1,022 | 0.355 | 0.645 | 0.000 | 0.000 | 3,607 | 1,281 | 2,325 | 0 | 0 | |
| 17 | mods | 1OpPref | 980 | 531 | 0 | 0 | 1,511 | 0.649 | 0.351 | 0.000 | 0.000 | 6,016 | 3,903 | 2,114 | 0 | 0 | |
| 18 | mods | 1Platform | 389 | 379 | 56 | 113 | 916 | 0.403 | 0.414 | 0.061 | 0.123 | 9,468 | 3,815 | 3,915 | 575 | 1,164 | |
| 19 | mods | 1Pouching | 446 | 186 | 0 | 0 | 632 | 0.705 | 0.295 | 0.000 | 0.000 | 2,598 | 1,832 | 766 | 0 | 0 | |
| 20 | mods | 1SackS_h | 260 | 210 | 0 | 0 | 471 | 0.553 | 0.447 | 0.000 | 0.000 | 2,183 | 1,207 | 976 | 0 | 0 | |
| 21 | mods | 1scan | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 190 | No Key | No Key | No Key | No Key | 190 |
| 22 | mods | 1EEqmt | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 311 | No Key | No Key | No Key | No Key | 311 |
| 23 | mods | Support Fcn 1 | 0 | 0 | 71 | 0 | 71 | 0.000 | 0.000 | 1.000 | 0.000 | 624 | 0 | 0 | 624 | 0 | |
| 24 | mods | BusReply | 0 | 0 | 0 | 4 | 4 | 0.000 | 0.000 | 0.000 | 1.000 | 31 | 0 | 0 | 0 | 31 | |
| 25 | mods | Express | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 12 | No Key | No Key | No Key | No Key | 12 |
| 26 | mods | Mailgram | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | No Key | No Key | No Key | No Key | 0 |
| 27 | mods | Registry | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 7 | No Key | No Key | No Key | No Key | 7 |
| 28 | mods | Rewrap | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 6 | No Key | No Key | No Key | No Key | 6 |
| 29 | mods | Intl | 41 | 0 | 0 | 22 | 63 | 0.650 | 0.000 | 0.000 | 0.350 | 226 | 147 | 0 | 0 | 79 | |
| 30 | mods | LD41 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 20 | No Key | No Key | No Key | No Key | 20 |
| 31 | mods | LD42 | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 1 | No Key | No Key | No Key | No Key | 1 |
| 32 | mods | LD43 | 264 | 3,679 | 0 | 0 | 3,944 | 0.067 | 0.933 | 0.000 | 0.000 | 9,521 | 639 | 8,882 | 0 | 0 | |
| 33 | mods | LD44 | 0 | 385 | 0 | 0 | 385 | 0.000 | 1.000 | 0.000 | 0.000 | 760 | 0 | 760 | 0 | 0 | |
| 34 | mods | Support Fcn 4 | 0 | 181 | 0 | 0 | 181 | 0.000 | 1.000 | 0.000 | 0.000 | 1,849 | 0 | 1,849 | 0 | 0 | |
| 35 | mods | LD48_Exp | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | No Key | No Key | No Key | No Key | 0 |
| 36 | mods | LD48_SpSv | 60 | 178 | 0 | 65 | 302 | 0.197 | 0.588 | 0.000 | 0.215 | 935 | 184 | 550 | 0 | 201 | |
| 37 | mods | LD49 | 352 | 614 | 0 | 120 | 1,086 | 0.324 | 0.565 | 0.000 | 0.111 | 2,307 | 748 | 1,305 | 0 | 255 | |
| 38 | mods | LD79 | 52 | 52 | 0 | 0 | 103 | 0.500 | 0.500 | 0.000 | 0.000 | 245 | 122 | 122 | 0 | 0 | |
| 39 | bmc | NMO | 483 | 333 | 0 | 0 | 816 | 0.591 | 0.409 | 0.000 | 0.000 | 4,566 | 2,701 | 1,865 | 0 | 0 | |
| 40 | bmc | Other | 1,702 | 2,620 | 0 | 57 | 4,379 | 0.389 | 0.598 | 0.000 | 0.013 | 36,319 | 14,116 | 21,727 | 0 | 476 | |
| 41 | bmc | Platform | 533 | 812 | 106 | 0 | 1,452 | 0.367 | 0.560 | 0.073 | 0.000 | 33,491 | 12,300 | 18,744 | 2,447 | 0 | |
| 42 | bmc | PSM | 4,408 | 5,599 | 0 | 0 | 10,007 | 0.441 | 0.559 | 0.000 | 0.000 | 27,850 | 12,269 | 15,581 | 0 | 0 | |
| 43 | bmc | SPB | 503 | 541 | 0 | 0 | 1,044 | 0.482 | 0.518 | 0.000 | 0.000 | 3,697 | 1,781 | 1,915 | 0 | 0 | |
| 44 | bmc | SSM | 339 | 635 | 0 | 0 | 974 | 0.348 | 0.652 | 0.000 | 0.000 | 4,220 | 1,470 | 2,750 | 0 | 0 | |
| 45 | non-mods | Allied | 70 | 1,907 | 0 | 0 | 1,977 | 0.035 | 0.965 | 0.000 | 0.000 | 8,360 | 296 | 8,065 | 0 | 0 | |
| 46 | non-mods | Auto Dist | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 68 | No Key | No Key | No Key | No Key | 68 |
| 47 | non-mods | Express | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0 | No Key | No Key | No Key | No Key | 0 |
| 48 | non-mods | Manual Flats | 0 | 2,312 | 0 | 0 | 2,312 | 0.000 | 1.000 | 0.000 | 0.000 | 4,440 | 0 | 4,440 | 0 | 0 | |
| 49 | non-mods | Manual Letter | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 97 | No Key | No Key | No Key | No Key | 97 |
| 50 | non-mods | Manual Parcel | 512 | 4,757 | 0 | 0 | 5,269 | 0.097 | 0.903 | 0.000 | 0.000 | 12,001 | 1,167 | 10,834 | 0 | 0 | |
| 51 | non-mods | Misc/Support | 278 | 224 | 0 | 0 | 502 | 0.553 | 0.447 | 0.000 | 0.000 | 1,618 | 895 | 723 | 0 | 0 | |
| 52 | non-mods | Registry | 0 | 0 | 0 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 8 | No Key | No Key | No Key | No Key | 8 |
| | Total | | 15,181 | 31,774 | 305 | 382 | 47,642 | 0.319 | 0.667 | 0.006 | 0.008 | 196,124 | 67,622 | 121,721 | 3,771 | 2,207 | 803 |
| | | | | | | | | | | | | | 0.345 | 0.621 | 0.019 | 0.011 | 0.004 |
| | | | | | | | | Summary by Office Type: | | MOD 1&2 Offices | | | 20,628 | 35,078 | 1,323 | 1,731 | 630 |
| | | | | | | | | | | BMC | | | 44,636 | 62,582 | 2,447 | 476 | 0 |
| | | | | | | | | | | Non-MODs | | | 2,357 | 24,061 | 0 | 0 | 173 |
| | | | | | | | | Summary with No Key Distributed: | | MOD 1&2 Offices | | | 20,849 | 35,454 | 1,337 | 1,749 | |
| | | | | | | | | | | BMC | | | 44,636 | 62,582 | 2,447 | 476 | |
| | | | | | | | | | | Non-MODs | | | 2,373 | 24,219 | 0 | 0 | |
| | | | | | | | | | | Total excluding BMCs | | | **23,222** | 59,673 | 1,337 | 1,749 | |
| | | | | | | | | | | BMCs | | | **44,636** | 62,582 | 2,447 | 476 | |

Source: LR-I-103 Standard Mail (B) Parcel Post and BPM Mail Processing and Window Service Costs

Total 67,859 122,255 3,785 2,226

**Attachment I, Table 2**

BPM pieces going through origin BMC (Exhibit H, Table 1)

| | |
|---|---|
| Origin AO = | 1.20% |
| Origin SCF = | 3.91% |
| Origin BMC/ASF = | 24.06% |
| Total | 29.17% |

| | |
|---|---|
| BPM pieces entered at the destination BMC/ASF = | 44.89% |
| Entered in the BMC service area = | 1.30% |
| Total pieces through destinating BMC only = | 46.19% |

Pieces processed through a BMC go through two stages. The first involves acceptance, unloading, preparation and the primary sort. The second involves the secondary sort, preparation, and loading. Both of these stages at the origin BMC are classified as outgoing costs. For intra-BMC and DBMC pieces at the destinating BMC, the first of these stages would be classified as outgoing (1) while the second would be classifed as incoming. For inter-BMC pieces, all costs at the destinating BMC would be classified as incoming.
Therefore, outgoing costs are comprised of all costs at the origin BMC plus intra-BMC and DBMC pieces at the destinating BMC. All costs at the origin BMC are avoided by DBMC entered pieces, but the outgoing costs at the destinating BMC may not be avoided.
From the numbers above the proportion of pieces going through BMCs:

29.17 / (29.17 + 46.19) = 38.7% = Inter-BMC pieces
46.19 / (29.17 + 46.19) = 61.3% = Intra-BMC and DBMC

The Inter-BMC pieces go through two "outgoing" stages at the origin BMC while the Intra/DBMC pieces go through one "outgoing" stage at the destinating BMC. Thus, of these three stage-legs, two are avoided by DBMC pieces while one is not.

(38.7 + 38.7)/ (38.7 + 38.7 + 61.3) = 55.8%

We can therefore estimate that 55.8 percent of outgoing costs at BMCs are avoided by DBMC entered pieces.

(1) Handbook F-45, Appendix B, page 2.

**Attachment I, Table 3**

| | | | |
|---|---|---|---|
| A. | Proportion of outgoing BMC costs avoided by DBMC | 55.80% | (Table 2) |
| B. | BMC Outgoing costs | $44,636 | (Table 1) |
| C. | Non-BMC Outgoing costs | $23,222 | (Table 1) |
| D. | FY 1998 BPM volume (000) | 488,413 | (FY 1998 RPW) |
| E. | Proportion of volume deposited upstream of the DBMC | 29.17% | (Attachment H, Table 1) |
| F. | TY/BY wage rate adjustment factor | 1.124 | USPS-LR-I-146 |
| G. | Total Base Year costs avoided by DBMC entered BPM<br>= A * B + C | $48,129 | |
| H. | Total Base Year volume of pieces deposited upstream of DBMC<br>= D * E | | 142,470 |
| I. | Total estimated Test Year DBMC cost savings<br>= G / H * F | $0.380 | |

## Attachment J, Table 1
## BPM DBMC Model Cost Summary

| | [1] # handlings | [2] units/hr | [3] conversion | [4] piggyback | [5] $ per oper. | [6] $ per facility |
|---|---|---|---|---|---|---|
| **Destination BMC** | | | | | | **0.2231** |
| Unload Pallets/Pallet Boxes | 0.9955 | 11.6 | 290.7 | 1.73 | 0.0140 | 0.0139 |
| Unload Bedload Sacks | 0.0045 | 176.9 | 31.1 | 1.73 | 0.0086 | 0.0000 |
| Dump Pallets/Pallet Boxes | 0.9955 | 6.3 | 290.7 | 1.73 | 0.0257 | 0.0255 |
| Sack Sorter | 0.0045 | 428.2 | 31.1 | 1.93 | 0.0040 | 0.0000 |
| Sack Shakeout | 0.0045 | 70.9 | 31.1 | 1.59 | 0.0197 | 0.0001 |
| Primary Sort | 1.0014 | 874.0 | 1.0 | 1.75 | 0.0548 | 0.0549 |
| Secondary Sort | 0.7969 | 1296.6 | 1.0 | 1.75 | 0.0369 | 0.0294 |
| Sweep Runouts OTR | 0.7327 | 5.3 | 332.4 | 1.59 | 0.0246 | 0.0180 |
| Sack and Tie | 0.2673 | 178.0 | 1.0 | 1.59 | 0.2443 | 0.0653 |
| Bedload Sacks | 0.2384 | 172.7 | 24.6 | 1.59 | 0.0102 | 0.0024 |
| Load OTRs w/ sacks | 0.0289 | 9.8 | 394.0 | 1.73 | 0.0122 | 0.0004 |
| Load OTRs w/ loose | 0.6025 | 9.8 | 332.4 | 1.73 | 0.0144 | 0.0087 |
| Load Hampers/OWC | 0.1302 | 9.8 | 141.2 | 1.73 | 0.0339 | 0.0044 |
| **Destination SCF** | | | | | | **0.0438** |
| Unload Bedload Sacks | 0.2091 | 145.8 | 24.6 | 1.64 | 0.0125 | 0.0026 |
| Unload Sacks in OTR | 0.0253 | 19.7 | 394.0 | 1.64 | 0.0058 | 0.0001 |
| Unload loose in OTR | 0.5284 | 19.7 | 332.4 | 1.64 | 0.0068 | 0.0036 |
| Unload OWC | 0.1142 | 19.7 | 141.2 | 1.64 | 0.0161 | 0.0018 |
| Crossdock Bedload Sacks | 0.2091 | 6.7 | 251.0 | 1.64 | 0.0268 | 0.0056 |
| Crossdock Sacks in OTR | 0.0253 | 6.7 | 394.0 | 1.64 | 0.0171 | 0.0004 |
| Crossdock loose in OTR | 0.5284 | 6.7 | 332.4 | 1.64 | 0.0203 | 0.0107 |
| Crossdock OWC | 0.1142 | 6.7 | 141.2 | 1.64 | 0.0477 | 0.0054 |
| Bedload Sacks | 0.2344 | 172.7 | 24.6 | 1.64 | 0.0105 | 0.0025 |
| Load OTRs w/ loose | 0.5284 | 9.8 | 332.4 | 1.64 | 0.0137 | 0.0072 |
| Load Hampers/OWC | 0.1142 | 9.8 | 141.2 | 1.64 | 0.0323 | 0.0037 |
| **Destination Delivery Unit** | | | | | | **0.0145** |
| Unload Bedload Sack | 0.2673 | 145.8 | 24.6 | 1.64 | 0.0125 | 0.0033 |
| Unload loose in OTR | 0.6025 | 19.7 | 332.4 | 1.64 | 0.0068 | 0.0041 |
| Unload OWC | 0.1302 | 19.7 | 141.2 | 1.64 | 0.0161 | 0.0021 |
| Dump Sacks | 0.2673 | 99.4 | 24.6 | 1.64 | 0.0183 | 0.0049 |
| **Total # of Sorts** | 1.7984 | | | **Model Cost** | | **$0.2814** |

Column [1]: Table 1.2, Table 1.3
Column [2]: Table 1.1
Column [3]: Table 1.1, Table 1.4
Column [4]: Table 1.3
Column [5]: (Adjusted Wage Rate * Piggyback Factor[4]) Divided by (Units per Workhour (2]*Conversion Factor[3])
Column [6]: (# of Handlings [1]) *($ per Operation [5])

Attachment J, Table 1.1

## Productivities and Conversion Factors for Direct Labor Operations

| | Units/Wkhr | | Conversion Factors (3) |
|---|---|---|---|
| **UNLOADING** | Marginal | | BPM |
| Unload sacked machinable parcels to extended conveyor | 187.0 | 1/ | 24.6 |
| Unload non-machinable parcels to IHC only (proxy for sacks) | 154.1 | 1/ | 24.6 |
| Unload machinable parcels sacked in OTRs | 20.8 | 1/ | 394.0 |
| Unload parcels loose in OTRs | 20.8 | 1/ | 332.4 |
| Unload Wire Tainer/Hamper/APC (Other Wheeled Cont. - OWC) | 20.8 | 1/ | 141.2 |
| Unload Pallets | 12.3 | 1/ | 262.0 |
| Unload Pallet Box | 12.3 | 1/ | 319.3 |
| | | | |
| **DUMPING & SACK HANDLING** | | | |
| Dump Sacks in OTRs | 6.4 | 1/ | 394.0 |
| Dump OTRs (loose) | 6.4 | 1/ | 332.4 |
| Dump Other Wheeled Containers (OWC) | 6.4 | 1/ | 141.2 |
| Dump Pallets | 6.4 | 1/ | 262.0 |
| Dump Pallet Boxess | 6.4 | 1/ | 319.3 |
| Sack shake out | 71.8 | 1/ | 24.6 |
| Manually dump sacks | 110.9 | 1/ | 24.6 |
| Sack sorter | 428.2 | 1/ | 24.6 |
| | | | |
| **PARCEL SORTING MACHINE DISTRIBUTION** | | | |
| Primary Rate | 874.0 | 1/ | |
| Secondary Rate | 1296.6 | 1/ | 1.0 |
| | | | |
| **OTHER OPERATIONS** | | | |
| Tend container loader/sweep runouts (Destinating BMC - OTR) | 5.4 | 1/ | 332.4 |
| Crossdock Pallets/OTRs | 7.1 | 1/ | n/a |
| Crossdock IHCs w/5-D sacks | 7.1 | 1/ | 251.0 |
| Sack and Tie | 180.3 | 2/ | 1.0 |
| | | | |
| **LOADING** | | | |
| Bedload Sacked Machinables | 182.6 | 1/ | 24.6 |
| Load loose parcels in OTRs to van | 10.4 | 1/ | 332.4 |
| Load sacked machinables in OTRs to van | 10.4 | 1/ | 394.0 |
| Load Other Wheeled Containers (OWC) to van | 10.4 | 1/ | 141.2 |
| | | | |
| **Variabilities** | | | |
| BMC Platform | 0.946 | 1/ | |
| BMC Other | 0.987 | 1/ | |
| PSM | 1.000 | 1/ | |
| SSM | 1.000 | 1/ | |
| SSB | 1.000 | 1/ | |
| NMO Distribution at BMCs | 1.000 | 1/ | |
| Platform Non-BMC | 0.896 | 1/ | |
| NMO Distribution at Non-BMCs (Explicit VV factor) | 0.522 | 1/ | |

1/: USPS-T-26, Attachment A
2/: LR- I- 88 - Bundle Study (Manprod.xls/scheme - All Manual productivity)
3/: Table 1.4

Attachment J, Table 1.2

## Arrival and Dispatch Profiles

| **Mail Flow Arrival at Destinating BMCs for BPM** | |
|---|---|
| Machinable Parcels Arriving on Pallets/Pallet Boxes at DBMC | 0.9955 |
| Machinable Parcels arriving in Sacks at DBMC | 0.0045 |

Source: LR-I-109, BPM Mail Characteristics Study

| **Mail Flow Dispatch Profiles From BMCs to Service Area** | |
|---|---|
| Machinable Parcels Dispatched in Bedloaded Sacks to Service Area | 23.84% |
| Machinable Parcels Dispatched loose in OTRs to Service Area | 60.25% |
| Machinable Parcels Dispatched sacked in OTRs to Service Area | 2.89% |
| Machinable Parcels Dispatched in Hampers/APC/OWC (OWC) to Service Area | 13.02% |

| **Mail Flow Dispatch Profiles to Delivery Unit** | |
|---|---|
| Machinable Parcels Dispatched in Bedloaded Sacks to Delivery Unit | 26.73% |
| Machinable Parcels Dispatched loose in OTRs to Service Area to Delivery Unit | 60.25% |
| Machinable Parcels Dispatched in OWC to Delivery Unit | 13.02% |

Source: USPS-T-26, Attachment A

## Other Inputs

| | |
|---|---|
| **Wage Rate with Premium Pay Factor Applied** | $27.142 |
| **Premium Pay Factor** | $0.961 |
| **TY Other Mail Processing Wage Rate** | $28.244 |

Source: LR-I-106, USPS-T-21, Attachment 15

| **Mail Processing Operation Specific Piggyback Factors** | |
|---|---|
| Parcel Sorting Machine | 1.782 |
| NMO Sorting at BMC | 1.532 |
| NMO Sorting at SCF | 1.504 |
| Other Operations at BMCs | 1.602 |
| Sack Sorting Machine - BMC | 1.935 |
| Platform Non-BMC | 1.651 |
| Platform BMC | 1.744 |

Source: USPS-T-21, Attachment 15

| **Mail Flow Operating Assumptions** | |
|---|---|
| Percent with direct transportation to destinating delivery unit from BMC | 12.3% |
| Percent Sorted to 5-Digits by Primary Parcel Sorting Machine | 20.2% |
| Destinating BMCs will feed barcoded destinating mail unfiltered to secondary | 21.7% |
| Probability that mail fed directly to nonspecific secondary will receive more than one sort | 50.0% |
| Probability that Mail sent to secondary will go to Scheme 2 | 50.0% |
| Probability that barcode on secondary will not be readable | 3.0% |
| Proportion of parcel singulators (SSIU) being at secondary | 6.0% |
| Proportion sent from secondary to primary due to SSIU | 0.2% |
| Probability of Intra-BMC and DBMC parcels going to primary psm | 100.14% |
| Probability of Intra-BMC and DBMC parcels being handled by a keyer on the secondary psm | 79.69% |

Source: USPS-T-26, Attachment A

Attachment J, Table 1.4

## Conversion Factor Calculations

| Container Type | [1] Outside Dim. Per Container | [2] Inside Dim. Per Container | [3] Cubic Feet Per Container | [4] Effective Parcel Capacity | [5] Capacity at Average Fullness | [6] Average % FULL |
|---|---|---|---|---|---|---|
| **Machinable** | | | | | | |
| Pallet | 48x40x48 | 48x40x48 | 53.3 | 308.3 | 262.0 | 85% |
| Pallet Box | 48x40x69 | 46.5x38.5x69 | 71.5 | 375.6 | 319.3 | 85% |
| Sacks on In-house Container | 65x41.5x36 | 65x41.5x36 | 56.2 | 295.3 | 251.0 | 85% |

| | | |
|---|---|---|
| Presorted pieces per container | | |
| Sacks | | 31.1 |
| No. of Sacks on IHC | 8.1 | |

| Pieces Per Container | [7] Parcel Post FY82 | [8] BPM FY 1998 |
|---|---|---|
| Sack | 7.92 | 24.6 |
| Sack in OTR | 126.7 | 394.0 |
| OTR | 106.9 | 332.4 |
| APC | 55.2 | 171.7 |
| Hamper | 35.6 | 110.7 |

| | [9] Cubic feet/piece - Parcel Post | [10] | [11] |
|---|---|---|---|
| | Form 12 Machinable | Form 22 CRA | CRA BPM |
| FY98 | 0.581 | 0.833 | 0.173 |
| FY82 | | 0.538 | |

Column [1]: Container Methods, Handbook PO-502 (September 1992) USPS LR-H-133.
Column [2]: Container Methods, Handbook PO-502 (September 1992) USPS LR-H-133.
Column [3]: Length * width * height.
Column [4]: (Column [3]) / ((column [13]) * air factor), to account for "effective cube" and (column [3]) / ((column [14]) * air factor) and (column [3]) / ((column
Air factor =1 for pallets, and 1.1 for all else.
Column [5]: Effective cubic capacity (column [4]) * average % fullness (column [6]).
Column [6]: Pallets, postal paks and IHCs should be as full as practicable before dispatch so it is reasonable to assume these containers will be at least 85%
Column [7]: Docket No. R84-1, Exhibit USPS-14I.
Column [8]: Pieces per container in Docket No. R84-1 (column [7]) * FY82 cubic feet per piece (column [10]) / FY98 cubic feet per piece for BPM (column [1
Column [9]: FY98 machinable cubic feet/ machinable pieces (USPS-T-26, Exhibit A).
Column [10]: FY82 Cubic feet per piece, FY98 Cubic feet per piece - CRA
Column [11]: FY98 BPM Cubic feet per piece - CRA

## DSCF Model Cost Summary

| | [1] # handlings | [2] units/hr | [3] conversion | [4] piggyback | [5] $ per oper. | [6] $ per facility |
|---|---|---|---|---|---|---|
| **MACHINABLE** | | | | | | |
| **Destination BMC** | | | | | | **$0.0063** |
| Unload Pallets | 0.1164 | 12.3 | 262.0 | 1.74 | $0.0147 | $0.0017 |
| Cross dock pallets | 0.1164 | 7.1 | 262.0 | 1.74 | $0.0255 | $0.0030 |
| Load Pallets | 0.1164 | 13.4 | 262.0 | 1.74 | $0.0135 | $0.0016 |
| **Destination SCF** | | | | | | **$0.1060** |
| Unload Pallet | 0.8300 | 12.3 | 262.0 | 1.65 | $0.0139 | $0.0116 |
| Unload Bedloaded Sacks to IHC | 0.0536 | 154.1 | 31.1 | 1.65 | $0.0093 | $0.0005 |
| Move Pallet | 0.6392 | 14.2 | 262.0 | 1.65 | $0.0121 | $0.0077 |
| Move IHC | 0.0112 | 14.2 | 251.9 | 1.65 | $0.0126 | $0.0001 |
| Dump Sacks | 0.0112 | 110.9 | 31.1 | 1.65 | $0.0130 | $0.0001 |
| Sort to 5-digit | 0.6504 | 433.0 | 1.0 | 1.50 | $0.0943 | $0.0613 |
| Move Pallet | 0.6504 | 14.2 | 262.0 | 1.65 | $0.0121 | $0.0079 |
| Crossdock Pallets | 0.1908 | 7.1 | 262.0 | 1.65 | $0.0241 | $0.0046 |
| Crossdock bedloaded sacks | 0.0424 | 7.1 | 251.9 | 1.65 | $0.0251 | $0.0011 |
| Load Pallets | 0.8412 | 13.4 | 262.0 | 1.65 | $0.0127 | $0.0107 |
| Bedload Sacks | 0.0424 | 182.6 | 31.1 | 1.65 | $0.0079 | $0.0003 |
| **Destination Delivery Unit** | | | | | | **$0.0143** |
| Unload Pallets | 0.9576 | 12.3 | 262.0 | 1.65 | $0.0139 | $0.0134 |
| Unload Bedloaded Sacks | 0.0424 | 154.1 | 31.1 | 1.65 | $0.0093 | $0.0004 |
| Dump Sacks | 0.0424 | 110.9 | 31.1 | 1.65 | $0.0130 | $0.0006 |
| TOTAL | | | | | | **$0.1265** |

**$0.1265**

Sources:

Column [1]: Table 2.2
Column [2]: Table 2.1
Column [3]: Table 2.2
Column [4]: Table 2.1
Column [5]: (Adjusted Wage Rate * Piggyback Factor[4]) Divided by (Units per Workhour (2]*Conversion Factor[3])
Column [6]: (# of Handlings [1]) *($ per Operation [5])

**BPM MODEL INPUTS**

| | Units/Hour |
|---|---|
| **UNLOADING** | |
| Unload non-machinable parcels to IHC only (proxy for sacks) | 154.1 |
| Unload Pallets | 12.3 |
| **DUMPING & SACK HANDLING** | |
| Manually dump sacks | 110.9 |
| **OTHER OPERATIONS** | |
| Manual Sort/Distribution at SCFs | 433.0 |
| Crossdock BMC Presorted Pallets | 7.1 |
| Crossdock BMC Presorted Gaylords | 7.1 |
| Crossdock IHCs w/5-d sacks or NMOs | 7.1 |
| **LOADING** | |
| Bedload Sacked Machinables | 182.6 |
| Load pallets to van | 13.4 |
| Load Postal Paks to van | 13.4 |
| Load Pallet Boxes to van | 13.4 |
| **Variabilities** | |
| BMC Platform | 0.946 |
| BMC Other | 0.987 |
| PSM | 1.000 |
| SSM | 1.000 |
| SSB | 1.000 |
| NMO Distribution at BMCs | 1.000 |
| Platform Non-BMC | 0.896 |
| NMO Distribution at Non-BMCs (Explicit VV factor) | 0.522 |

Source: USPS-T-26, Attachment A

| **Inputs** | |
|---|---|
| Wage Rate with Premium Pay Factor Applied | $27.142 |
| Premium Pay Factor | $0.961 |
| TY Other Mail Processing Wage Rate | $28.244 |

Source: LR-I-106, USPS-T-21, Attachment 15.

| **Mail Processing Operation Specific Piggyback Factors** | |
|---|---|
| Parcel Sorting Machine | 1.782 |
| NMO Sorting at BMC | 1.532 |
| NMO Sorting at SCF | 1.504 |
| Other Operations at BMCs | 1.602 |
| Sack Sorting Machine - BMC | 1.935 |
| Platform Non-BMC | 1.651 |
| Platform BMC | 1.744 |

Source: USPS-T-21, Attachment 14

## INPUTS FOR DROPSHIP MODELS

| | | |
|---|---|---|
| **Proportion presorted to 5-digit or beyond** | | [1] |
| Pallets | 23.0% | |
| Sacks | 79.1% | |

| | | |
|---|---|---|
| **Average number of Sacks on an IHC** | 8.1 | [2] |

### DSCF specific inputs

| | | |
|---|---|---|
| **Proportion of DSCF dropped at BMCs** | 12.30% | |
| **Proportion of DSCF using requirements** | BPM | |
| Sacks | 0.0536 | [3] |
| Pallet and Pallet Boxes | 0.9464 | |
| **Average Number of dropshipped BPM pieces** | BPM | |
| Sacks | 31.1 | [4] |
| Pallets | 262.0 | [5] |

[1] LR-I-109, BPM Mail Characteristics Study - DSCF Presort Profile
[2] Attachment J, Table 1.4
[3] LR-I-109, BPM Mail Characteristics Study - DSCF Presort Profile
(Bedloaded Bundles excluded because assumed they will not be allowed in Test Year.)
[4] Attachment J, Table 1.4
[5] Attachment J, Table 1.1

## Attachment K, Table 1
## Division of Bound Printed Matter Transportation Costs

| | [1] Total BY BPM Transportation Costs (000) | [2] Local Costs | [2] Intermediate Costs | [2] Long Distance - ZR Costs | [2] Long Distance - NZR Costs |
|---|---|---|---|---|---|
| **Domestic Airmail** | | | | | |
| Passenger Air | $1,198 | | | $446 | $752 |
| Intra-Alaska preferential | $571 | | $571 | | |
| Intra-Alaska non-pref[3] | $10 | | $10 | | |
| Intra-Hawaii | $56 | | $56 | | |
| Eagle Network | $7 | | | | $7 |
| Christmas | $7 | | | $5 | $2 |
| Air taxi[5] | $108 | $0 | $37 | $26 | $44 |
| **Total Domestic Airmail** | **$1,957** | **$0** | **$674** | **$477** | **$806** |
| ***Domestic Airmail Percent*** | ***100.00%*** | ***0.00%*** | ***34.45%*** | ***24.37%*** | ***41.18%*** |
| **Highway Service** | | | | | |
| Intra-SCF | $14,266 | $14,266 | | | |
| Inter-SCF | $4,802 | | $4,802 | | |
| Plant loaded | $4,310 | | $4,310 | | |
| Intra-BMC | $16,004 | | $16,004 | | |
| Inter-BMC | $11,511 | | | $11,511 | |
| Alaskan highway service | $334 | | $334 | | |
| Contract term van damage[5] | $78 | $22 | $38 | $18 | $0 |
| Area bus | $2 | | | $2 | |
| Empty equipment[5] | $373 | $104 | $185 | $84 | $0 |
| **Total Highway Service** | **$51,680** | **$14,392** | **$25,674** | **$11,614** | **$0** |
| ***Highway Service Percent*** | ***100.00%*** | ***27.85%*** | ***49.68%*** | ***22.47%*** | ***0.00%*** |
| **Railroad Service** | | | | | |
| Passenger rail | $277 | | | $277 | |
| Freight rail | $8,387 | | | $8,387 | |
| Plant loaded | $204 | | $204 | | |
| Empty equipment[5] | $1,055 | $0 | $24 | $1,031 | $0 |
| **Total railroad service** | **$9,923** | **$0** | **$228** | **$9,695** | **$0** |
| ***Railroad Service Percent*** | ***100.00%*** | ***0.00%*** | ***2.30%*** | ***97.70%*** | ***0.00%*** |
| **Domestic Water** | | | | | |
| Inland | $162 | $162 | | | |
| Offshore | $881 | | $881 | | |
| **Total Domestic Water** | **$1,043** | **$162** | **$881** | **$0** | **$0** |
| ***Domestic Water Percent*** | ***100.00%*** | ***15.53%*** | ***84.47%*** | ***0.00%*** | ***0.00%*** |

[1] Base Year transportation costs (USPS-T-11, WP.B)

[2] Rationale for allocating costs can be found in Docket No. R97-1, USPS-T-16, Appendix I, pages 1-5.

## Attachment K, Table 2
## Division of Bound Printed Matter Transportation Costs
### Summary of Test Year Transportation Costs

| | | Domestic Airmail | Highway Service | Railroad Service | Domestic Water | Total |
|---|---|---|---|---|---|---|
| **Test Year Cost Adjustments** | | | | | | |
| Total BPM Base Year Costs | 1/ | $1,957 | $51,680 | $9,923 | $1,043 | $64,603 |
| Total BPM Test Year Costs | 2/ | $2,199 | $62,802 | $10,980 | $1,231 | $77,212 |
| Percentage Increase | 3/ | 12.37% | 21.52% | 10.65% | 18.02% | 19.52% |
| BPM Test Year Costs | | $2,199 | $62,802 | $10,980 | $1,231 | $77,212 |
| **Bound Printed Matter Costs by Function** | | | | | | |
| Base Year Local Cost Percentage | 4/ | 0.00% | 27.85% | 0.00% | 15.53% | |
| Base Year Intermediate Cost Percentage | 5/ | 34.45% | 49.68% | 2.30% | 84.47% | |
| Base Year Long Distance ZR Percentage | 6/ | 24.37% | 22.47% | 97.70% | 0.00% | |
| Base Year Long Distance NZR Percentage | 7/ | 41.18% | 0.00% | 0.00% | 0.00% | |
| Test Year Local Costs | 8/ | $0 | $17,489 | $0 | $191 | $17,680 |
| Test Year Intermediate Costs | 9/ | $758 | $31,199 | $253 | $1,040 | **$33,249** |
| Test Year Long Distance ZR Costs | 10/ | $536 | $14,114 | $10,727 | $0 | $25,377 |
| Test Year Long Distance NZR Costs | 11/ | $906 | $0 | $0 | $0 | $906 |
| Test Year Total Long Distance Costs | 12/ | $1,441 | $14,114 | $10,727 | $0 | **$26,283** |
| **Postal Owned Vehicle Costs** | | | | | | |
| Test Year Postal Owned Vehicle Costs | 13/ | | | | | $16,997 |
| Piggyback Factor | 14/ | | | | | 1.499 |
| Total Postal Owned Vehicle Costs | 15/ | | | | | $25,479 |
| Test Year Local Costs | 16/ | | | | | $43,159 |
| Adjustment Factor | 17/ | | | | | 0.8357 |
| Adjusted Test Year Local Costs | 18/ | | | | | **$36,067** |
| Local + Intermediate + Long distance | 19/ | | | | | **$95,599** |

Row 1/: Total transportation cost by mode from base year purchased transportation cost report (USPS-T-11, Meehan WP.B).
Row 2/: Total transportation cost by mode from test year roll-forward (USPS-T-14, Kashani WP).
Row 3/: (Row 2 - row 1) / row 1.
Row 4/: Table 1 local cost percentages by mode.
Row 5/: Table 1 intermediate cost percentages by mode.
Row 6/: Table 1 long distance (zone related) cost percentages by mode.
Row 7/: Table 1 long distance (non-zone related) cost percentages by mode.
Row 8/: Row 7 * row 6.
Row 9/: Row 8 * row 6.
Row 10/: Row 9 * row 6.
Row 11/: Row 10 * row 6.
Row 12/: Row 10 + row 11.
Row 13/: USPS-T-14, Kashani WP.
Row 14/: USPS-T-21, Attachment 11.
Row 15/: Row 13 * row 14.
Row 16/: Row 15 + total of row 8.
Row 17/: Table 5
Row 18/: Row 16 * row 17.
Row 19/: Row 9 + Row 12 + Row 18

## Attachment K, Table 2.1
## Calculation of Local and Intermediate Costs/Piece

| | | |
|---|---|---|
| Local transportation legs = | | 1.118 [1] |
| Intermediate transpo. legs = | | 0.950 [2] |
| Local costs/piece = | $ 0.024 | [3] |
| Intermed. costs/pc. = | $ 0.026 | [4] |

[1]: OAO to OSCF (entered at Origin AO) + DSCF to DDU (mail ending up at destinating SCF) + DBMC to DDU (12.3% of mail goes directly from destinating BMC to destinating delivery unit). Refer to Attachment H, Tables 2 & 3.
[2]: OSCF to OBMC (Origin AO + Origin SCF entered mail) + DBMC to DSCF (mail ending up at the destinating BMC * 87.7% that goes to destinating SCF). Refer to Attachment H, Tables 2 & 3.
[3]: Local costs / (TY BPM volume * Local transportation legs).
[4]: Intermediate costs / (TY BPM volume * Intermediate transportation legs).

# Attachment K, Table 3
## Bound Printed Matter Transportation Costs
### Calculation of DBMC Rated BPM Costs per Pound by Zone

**DBMC BPM transportation costs by distance relation**

| | |
|---|---|
| Local costs incurred by BPM (non-distance related) | $13,001 1/ |
| Intermediate costs incurred by BPM (distance related) | $12,366 2/ |
| **Total DBMC BPM transportation costs** | **$25,367 3/** |

**Total DBMC Test Year Pounds =** 535,912,906 [15]

| Zone | [4] Percentage of DBMC pounds | [5] Percentage of DBMC pound miles | [6] Local costs (000) | [7] Intermediate costs (000) | [8] Test Year Pounds | [9] Average Zoned Haul | [10] Test Year Pound Miles |
|---|---|---|---|---|---|---|---|
| 1-2 | 81.73% | 51.41% | $10,626 | $6,358 | 438,007 | 59 | 25,842,412 |
| 3 | 14.01% | 32.71% | $1,821 | $4,044 | 75,065 | 219 | 16,439,305 |
| 4 | 4.20% | 15.30% | $545 | $1,892 | 22,482 | 342 | 7,688,689 |
| 5 | 0.07% | 0.58% | $9 | $72 | 354 | 829 | 293,219 |
| **Total** | **100.00%** | **100.00%** | **$13,001** | **$12,366** | | | 50,263,625 |

| Zone | [11] Local transpo./ DSCF Unit Costs ($/Lb.) | [12] Intermediate Unit Costs ($/Lb.) | [13] Total DBMC Unit Costs ($/Lb.) | [14] Reconcile to Total Costs (000) |
|---|---|---|---|---|
| 1-2 | $ 0.0243 | $0.0166 | $0.0408 | $16,983,659 |
| 3 | $ 0.0243 | $0.0614 | $0.0857 | $5,865,393 |
| 4 | $ 0.0243 | $0.0959 | $0.1202 | $2,436,932 |
| 5 | $ 0.0243 | $0.2325 | $0.2568 | $80,717 |
| 6 | N/A | N/A | N/A | N/A |
| 7 | N/A | N/A | N/A | N/A |
| 8 | N/A | N/A | N/A | N/A |
| **Total** | | | | **$25,366,702** |

1/: Local cost per pound * pounds on DBMC Local leg (prop. Depos. at DBMC * total lbs.) * prop. of mail on that flowpath
2/: Intermediate cost per lb. * lbs. on DBMC Local leg (prop. Depos. at DBMC * total lbs.) * prop. of mail on that flowpath
3/: 1/ + 2/ (Also see Table 2.1 for calculation of Local and Intermediate costs per pound.)
[4]: Attachment H, Table 2 (Results of BPM Mail Characteristics Study).
[5]: Proportion of [10], by zone.
[6]: [1] * [4]
[7]: [2] * [5]
[8]: [4] * [15] (DBMC-entered TY pounds)
[9]: LR-I-105, Page 88 / Page 40.
[10]: [8] * [9]
[11]: [6] * 1000/([4]*[15])
[12]: [7] * 1000/([4]*.877*[15])
[13]: [11] + [12]
[14]: ([11]*[15]+[12]*.877*[15])*[4]
[15]: 1329808700 (TY DBMC pounds) * 40.3% (Proportion deposited at DBMC)

| | | | | | | $25,377 10/ | | $ 39,629 11/ | |
|---|---|---|---|---|---|---|---|---|---|
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] |
| | Volume by zone | Pounds | Average zoned haul | Average pound-Miles | Pound-miles by zone | Zone dist related costs | Zone dist related costs/lb. | Non-zone d-related costs/lb. | **Total** |
| 1/2 | 22.28% | 107,550 | 60 | 6,453,008 | 2.32% | $588 | $ 0.0055 | $ 0.0821 | $ 0.0876 |
| 3 | 14.58% | 70,381 | 238 | 16,750,596 | 6.01% | $1,526 | $ 0.0217 | $ 0.0821 | $ 0.1038 |
| 4 | 27.89% | 134,631 | 457 | 61,526,259 | 22.09% | $5,606 | $ 0.0416 | $ 0.0821 | $ 0.1237 |
| 5 | 20.85% | 100,647 | 813 | 81,826,203 | 29.38% | $7,456 | $ 0.0741 | $ 0.0821 | $ 0.1562 |
| 6 | 6.46% | 31,184 | 1182 | 36,859,190 | 13.23% | $3,359 | $ 0.1077 | $ 0.0821 | $ 0.1898 |
| 7 | 4.47% | 21,578 | 1600 | 34,524,174 | 12.40% | $3,146 | $ 0.1458 | $ 0.0821 | $ 0.2279 |
| 8 | 3.47% | 16,750 | 2422 | 40,569,477 | 14.57% | $3,697 | $ 0.2207 | $ 0.0821 | $ 0.3028 |
| | 100.00% | 482,721 | | 278,508,908 | | | | | |

[1]: Attachment H, Table 2.1 (Results of BPM Mail Characteristics Study).

[2]: 1323237 (TY DBMC pounds(000)) * .363 (Non-dropshipped proportion) * [1]

[3]: LR-I-105, (Page 98-page 92) / (Page 50-page 44).

[4]: [2] * [3]

[5]: Proportion of [4] by zone.

[6]: [5] * 10/

[7]: [6] divided by [2]

[8]: 11/ divided by sum of [2]

[9]: [7] + [8]

10/: TY Long distance, zone related transportation costs - Table 2

11/: TY Non-dropship, non zone distance related costs - Table 4

## Attachment K, Table 4
## Bound Printed Matter Transportation Costs

| | | |
|---|---|---|
| **Total intra-SCF highway transportation costs by contract type** | | |
| Intra-SCF vans | $244,999 | 1/ |
| Intra-SCF trailers | $121,983 | 2/ |
| Intra-city | $25,473 | 3/ |
| Box-route | $46,681 | 4/ |
| **Total** | **$439,137** | 5/ |
| | | |
| **Percentage of intra-SCF highway and POV costs avoided by DDU parcels** | **83.57%** | 6/ |
| | | |
| **DSCF transportation cost per pound ($/lb)** | **$0.0243** | 7/ |
| | | |
| DBMC transportation costs | 25,367 | |
| DSCF transportation costs | 5,226 | |
| Total | 30,593 | |
| | | |
| Total from Table 2 | 95,599 | |
| Non-dropship transportation costs | 65,006 | |
| Zone-related non-dropship costs | 25,377 | |
| Not zone-related non-dropship costs | 39,629 | |

Row 1/ - 4/: USPS-T-26, Attachment N
Row 5/: Row 4 + row 3 + row 2 + row 1.
Row 6/: (Row 1 + row 2) / row 5.
Row 7/: Table 3.

## Attachment K, Table 5
## Division of Parcel Transportation Costs

**INPUTS**

| | D.R. | N.D.R. |
|---|---|---|
| Passenger Air Distance Relation Factor | 37.2% | 62.8% |
| Christmas Air Distance Relation Factor | 70.1% | 29.9% |

Source: USPS-T-26, Attachment M

Attachment K, Table 6
Transportation Cost Summary

| | | |
|---|---|---|
| $ | 7,091 | Test Year remainder transportation costs |
| | 1,329,808 | Test Year pounds |

| DBMC | | | TOTAL |
|---|---|---|---|
| Zone 1/2 | $ 0.041 | $ 0.005 | $ 0.046 |
| Zone 3 | $ 0.086 | $ 0.005 | $ 0.091 |
| Zone 4 | $ 0.120 | $ 0.005 | $ 0.126 |
| Zone 5 | $ 0.257 | $ 0.005 | $ 0.262 |
| | | | |
| DSCF | 0.024 | $ 0.005 | $ 0.029 |
| DDU | 0 | $ 0.005 | $ 0.005 |
| | | | |
| Non-D/S | | | |
| Zone 1/2 | $ 0.088 | $ 0.005 | $ 0.093 |
| Zone 3 | $ 0.104 | $ 0.005 | $ 0.109 |
| Zone 4 | $ 0.124 | $ 0.005 | $ 0.129 |
| Zone 5 | $ 0.156 | $ 0.005 | $ 0.162 |
| Zone 6 | $ 0.190 | $ 0.005 | $ 0.195 |
| Zone 7 | $ 0.228 | $ 0.005 | $ 0.233 |
| Zone 8 | $ 0.303 | $ 0.005 | $ 0.308 |

## Attachment L, Table 1
## INPUTS

| Productivity (units per manhour) | with variability | Operation | Source |
|---|---|---|---|
| 145.8 | 154.1 | unload sacks from van to in-house countainer (IHC) - (SCF) | USPS-T-26, Attachment A |
| 20.0 | 22.3 | move all-purpose container (APC), IHC to outbound dock - (SCF) | Docket No. R97-1, LR-H-111, Appendix F |
| 172.7 | 182.6 | load sacks to van from IHC - (BMC) | USPS-T-26, Attachment A |
| 176.9 | 187.0 | unload sacks to conveyor - (SCF) | USPS-T-26, Attachment A |
| 172.7 | 182.6 | load sacks to van from extendible conveyor - (SCF) | USPS-T-26, Attachment A |
| 428.2 | 428.2 | sack sorter - (SCF) | USPS-T-26, Attachment A |
| 11.6 | 12.3 | unload pallets - (BMC) | USPS-T-26, Attachment A |
| 8.6 | 9.6 | move pallets to outbound dock - (SCF) | Docket No. R97-1, LR-H-111, Appendix F |
| 12.7 | 13.4 | load pallets to van - (BMC) | USPS-T-26, Attachment A |
| 176.9 | 187.0 | unload sacks to extendible conveyor - (BMC) | USPS-T-26, Attachment A |
| 172.7 | 182.6 | load sacks to van from extendible conveyor - (BMC) | USPS-T-26, Attachment A |
| 9.8 | 10.4 | load containers to van - (BMC) | USPS-T-26, Attachment A |
| 172.7 | 182.6 | load sacks from roller table to IHC - (BMC) | USPS-T-26, Attachment A |
| 428.2 | 428.2 | sack sorter - (BMC) | USPS-T-26, Attachment A |
| 6.7 | 7.1 | crossdock pallets - (BMC) | USPS-T-26, Attachment A |
| 98.6 | 98.6 | primary NMO sort - (BMC) | USPS-T-26, Attachment A |
| 226.0 | 226.0 | secondary NMO sort - (BMC) | USPS-T-26, Attachment A |
| 167.1 | 176.6 | load NMOs to van from IHC - (BMC) | USPS-T-26, Attachment A |

| Container Conversion Factor | Description | Source |
|---|---|---|
| 26.5 | sacks per IHC | Docket No. R97-1, LR-H-111, Appendix F |
| 40.0 | sacks per BMC container | Docket No. R97-1, LR-H-111, Appendix F |

| Percentage | Flow Description | Source |
|---|---|---|
| 73.79% | sack sorter machine (SSM) to load to van from extendible conveyor | Docket No. R97-1, LR-H-111, Appendix F |
| 16.01% | SSM to roller table to BMC containers and load BMC containers to van | Docket No. R97-1, LR-H-111, Appendix F |
| 10.20% | SSM to roller table to in-house containers and load sacks to van from IHCs | Docket No. R97-1, LR-H-111, Appendix F |

**Attachment L, Table 2**
**INPUTS**

| Value | Description | Source |
|---|---|---|
| $28.244 | TY 2001 Other Mail Processing productive hourly wage rate | USPS LR-I-106 |
| 28.15 | pieces per sack | USPS LR-I-87 Periodicals Mail Characteristics Survey |
| 1,532.11 | pieces per pallet | USPS LR-I-87 Periodicals Mail Characteristics Survey |
| 11.13% | proportion of SCFs that are mechanized | MC95-1, Exhibit USPS-T-11U |
| 88.87% | proportion of SCFs that are not mechanized | MC95-1, Exhibit USPS-T-11U |
| 35.58% | proportion of mail in sacks | USPS LR-I-87 Periodicals Mail Characteristics Survey |
| 64.42% | proportion of mail on pallets | USPS LR-I-87 Periodicals Mail Characteristics Survey |
| 1.015 | Base Year FY 98 premium pay factor | USPS-T-21, Attachment 15 |
| 2.0096 | FY 1998 pieces per pound | 1998 RPW (USPS-T-4&5) |
| 0.9713 | BMC realization factor | R94-1, Tr. 8/4006 |
| 96.86% | proportion of volume from DBMCs to DDUs via DSCFs | R90-1, Exhibit USPS-12B, p. 5 |
| 3.14% | proportion of volume from DBMCs directly to DDUs | R90-1, Exhibit USPS-12B, p. 5 |
| 1.935 | piggyback factor for sack sorters at BMCs | USPS-T-21, Attachment 14, BMCS SSM |
| 1.71 | piggyback factor for sack sorters at non-BMCs | USPS -T-21, Attachment 14, MODS 13 Sacks_M |
| 1.744 | piggyback factor for platform at BMCs | USPS -T-21, Attachment 14, BMCS PLA |
| 1.651 | piggyback factor for platform at non-BMCs | USPS-T-21, Attachment 14, MODS 17 Platfrm |
| 1.542 | piggyback factor for opening units | USPS-T-21, Attachment 14, MODS 17 Oppref |
| 1.602 | piggyback factor for other mail processing - BMCs | USPS-T-21, Attachment 14, BMCS OTHR |

**Attachment L, Table 3**

**Periodicals Mail**
**Calculations of Crossdocking Costs at SCFs**

| Operation | | | (1) Productivity Sacks(Pallets)/hr | (2) pieces per sack(pallet) | (3) wage rate | (4) Piggy back | (5) premium pay factor | (6) Costs per hr Col3*Col4*Col5 | (7) Pieces per hr Col1*Col2 | (8) costs per piece Col6/Col7 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sacks | Manual | Unload sacks from van to in-house container | 154.1226216 | 28.15 | $28.24 | 1.651 | 1.015 | $47.33 | 4,338.55 | $0.010909 |
| | | Move APC to outbound dock | 591.5178571 [1] | 28.15 | $28.24 | 1.651 | 1.015 | $47.33 | 16,651.23 | $0.002842 |
| | | Load sacks to van | 182.5581395 | 28.15 | $28.24 | 1.651 | 1.015 | $47.33 | 5,139.01 | $0.009210 |
| | Mechanized | Unload sacks to conveyor | 186.9978858 | 28.15 | $28.24 | 1.651 | 1.015 | $47.33 | 5,263.99 | $0.008991 |
| | | Load sacks to van from extendible conveyor | 182.5581395 | 28.15 | $28.24 | 1.651 | 1.015 | $47.33 | 5,139.01 | $0.009210 |
| | | Sack sorter | 428.2 | 28.15 | $28.24 | 1.71 | 1.015 | $49.02 | 12,053.83 | $0.004067 |
| Pallets | Manual | Unload pallets | 12.26215645 | 1532.11 | $28.24 | 1.651 | 1.015 | $47.33 | 18,786.97 | $0.002519 |
| | | Move pallets to outbound dock | 9.568214286 | 1532.11 | $28.24 | 1.651 | 1.015 | $47.33 | 14,705.52 | $0.003219 |
| | | Load pallets to van | 13.42494715 | 1532.11 | $28.24 | 1.651 | 1.015 | $47.33 | 20,568.50 | $0.002301 |

Weighted costs per piece

| | (1) | | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|---|
| Operation | % | | % | % overall Col1*Col2 | Costs per piece | Weighted Costs Per Piece Col3*Col4 |
| Sacks | 35.58% | Manual | 88.87% | 31.62% | 0.022961694 | $0.007260 |
| | | Mechanized | 11.13% | 3.96% | 0.022268236 | $0.000882 |
| Pallets | 64.42% | Manual | 100% | 64.42% | 0.008038962 | $0.005179 |
| Total | 100% | | | 100% | | $0.013321 |

Weighted costs per pound

$ 0.026688 [2]

1. Includes a container conversion factor of 26.5 sacks per IHC from Table 1.
2. Weighted average cost per piece multiplied by Test Year pieces per pound.

**Attachment L, Table 4**

**Periodicals Mail**
**Calculations of Crossdocking Costs at BMCs**

| | | | Percentage of Sack Flow from BMC Sack Sorters | (1) Productivity | (2) pieces per unit | (3) Wage rates | (4) Piggyback Factor | (5) Premium Pay Factor | (6) BMC Realization Factor | (7) costs per hr Col3*Col4*Col5*Col6 | (8) Pieces per hr Col1*Col2 | (9) Costs per piece Col7/Col8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sacks | Manual | Unload sacks to extendible conveyor | N/A | 186.9978859 | 28.15 | $28.24 | 1.744 | 1.015 | 0.9713 | $48.5815 | 5263.890486 | $0.00923 |
| | | Load sacks to van from extendible conveyor | 73.79% | 182.5581395 | 28.15 | $28.24 | 1.744 | 1.015 | 0.9713 | $48.5815 | 5139.011628 | $0.00945 |
| | | Load sacks from roller table to IHC | 16.01% | 182.5581395 | 28.15 | $28.24 | 1.642 | 1.015 | 0.9713 | $42.9368 | 5139.011628 | $0.00836 |
| | | Load containers to van | 16.01% | 414.3783214 | 28.15 | $28.24 | 1.744 | 1.015 | 0.9713 | $48.5815 | 11664.69345 | $0.00416 |
| | | Load sacks from roller table to IHC | 10.20% | 182.5581395 | 28.15 | $28.24 | 1.642 | 1.015 | 0.9713 | $42.9368 | 5139.011628 | $0.00836 |
| | | Load sacks to van from IHC | 10.20% | 182.5581395 | 28.15 | $28.24 | 1.744 | 1.015 | 0.9713 | $48.5815 | 5139.011628 | $0.00945 |
| | | Sack sorter | N/A | 428.2 | 28.15 | $28.24 | 1.935 | 1.015 | 0.9713 | $53.8799 | 12053.83 | $0.00447 |
| Pallets | Manual | Unload pallets | N/A | 12.26215645 | 1532.11 | $28.24 | 1.744 | 1.015 | 0.9713 | $48.5815 | 18788.97252 | $0.00258 |
| | | Crossdock pallets | N/A | 7.082452431 | 1532.11 | $28.24 | 1.602 | 1.015 | 0.9713 | $44.6075 | 10851.09619 | $0.00411 |
| | | Load pallets to van | N/A | 13.42484715 | 1532.11 | $28.24 | 1.744 | 1.015 | 0.9713 | $48.5815 | 20568.49577 | $0.00236 |

Weighted costs per piece

| | (1) | | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|---|
| Operation | % | | % | % overall Col1*Col2 | Costs per piece | weighted costs Col3*Col4 |
| Sacks | 35.56% | unload | 100.00% | 35.56% | 0.009226226 | $0.003282 |
| | | ext | 73.79% | 26.25% | 0.00644958 | $0.002481 |
| | | roller | 16.01% | 5.70% | 0.012518186 | $0.000713 |
| | | roller IHC | 10.20% | 3.63% | 0.017804658 | $0.000646 |
| | | SSM | 100.00% | 35.56% | 0.004469938 | $0.001590 |
| Pallets | 64.42% | Manual | 100.00% | 64.42% | 0.009056892 | $0.005834 |
| Total | 100% | | | | | $0.014547 |

Weighted Costs per pound
0.029234 [2]

1. Includes a container conversion factor of 40 sacks per BMC container from Table 1.
2. Weighted average cost per piece multiplied by Test Year pieces per pound.

**Attachment M, Table 1**
**INPUTS**

| Productivity (units per manhour) | with variability | Operation | Source |
|---|---|---|---|
| 145.8 | 154.1 | unload sacks from van to in-house countainer (IHC) - (SCF) | USPS-T-26, Attachment A |
| 20.0 | 22.3 | move all-purpose container (APC), IHC to outbound dock - (SCF) | Docket No. R97-1, LR-H-111, App. G |
| 172.7 | 182.6 | load sacks to van from IHC - (BMC) | USPS-T-26, Attachment A |
| 176.9 | 187.0 | unload sacks to conveyor - (SCF) | USPS-T-26, Attachment A |
| 172.7 | 182.6 | load sacks to van from extendible conveyor - (SCF) | USPS-T-26, Attachment A |
| 428.2 | 428.2 | sack sorter - (SCF) | USPS-T-26, Attachment A |
| 11.6 | 12.3 | unload pallets - (BMC) | USPS-T-26, Attachment A |
| 8.6 | 9.6 | move pallets to outbound dock - (SCF) | Docket No. R97-1, LR-H-111, App. G |
| 12.7 | 13.4 | load pallets to van - (BMC) | USPS-T-26, Attachment A |
| 176.9 | 187.0 | unload sacks to extendible conveyor - (BMC) | USPS-T-26, Attachment A |
| 172.7 | 182.6 | load sacks to van from extendible conveyor - (BMC) | USPS-T-26, Attachment A |
| 9.8 | 10.4 | load containers to van - (BMC) | USPS-T-26, Attachment A |
| 172.7 | 182.6 | load sacks from roller table to IHC - (BMC) | USPS-T-26, Attachment A |
| 428.2 | 428.2 | sack sorter - (BMC) | USPS-T-26, Attachment A |
| 6.7 | 7.1 | crossdock pallets - (BMC) | USPS-T-26, Attachment A |
| 98.6 | 98.6 | primary NMO sort - (BMC) | USPS-T-26, Attachment A |
| 226.0 | 226.0 | secondary NMO sort - (BMC) | USPS-T-26, Attachment A |
| 167.1 | 176.6 | load NMOs to van from IHC - (BMC) | USPS-T-26, Attachment A |

| Container Conversion Factor | Description | Source |
|---|---|---|
| 26.5 | sacks per IHC | Docket No. R97-1, LR-H-111, App. G |
| 40.0 | sacks per BMC container | Docket No. R97-1, LR-H-111, App. G |

| Percentage | Flow Description | Source |
|---|---|---|
| 73.79% | sack sorter machine (SSM) to load to van from extendible conveyor | Docket No. R97-1, LR-H-111, App. G |
| 16.01% | SSM to roller table to BMC containers and load BMC containers to van | Docket No. R97-1, LR-H-111, App. G |
| 10.20% | SSM to roller table to in-house containers and load sacks to van from in-house containers | Docket No. R97-1, LR-H-111, App. G |

**Attachment M, Table 2**
**INPUTS**

| Value | Description | Source |
|---|---|---|
| $28.244 | TY clerk/mailhandler productive hourly wage rate | USPS LR-I-106 |
| 36.44 | pieces per sack | USPS LR-I-87 Periodicals Mail Characteristics Survey |
| 3,458.67 | pieces per pallet | USPS LR-I-87 Periodicals Mail Characteristics Survey |
| 11.13% | proportion of SCFs that are mechanized | MC95-1, Exhibit USPS-T-11U, page 2 |
| 88.87% | proportion of SCFs that are not mechanized | MC95-1, Exhibit USPS-T-11U, page 2 |
| 24.71% | proportion of mail in sacks | USPS LR-I-87 Periodicals Mail Characteristics Survey |
| 75.29% | proportion of mail on pallets | USPS LR-I-87 Periodicals Mail Characteristics Survey |
| 1.010 | Base Year premium pay factor | USPS-T-21, Attachment 15 |
| 3.6522 | FY 1998 pieces per pound | 1998 RPW (USPS-T-4&5) |
| 0.9713 | BMC realization factor | R94-1, Tr. 8/4006 |
| 96.86% | proportion of volume from DBMCs to DDUs via DSCFs | R90-1, Exhibit USPS-12B, p. 5 |
| 3.14% | proportion of volume from DBMCs directly to DDUs | R90-1, Exhibit USPS-12B, p. 5 |
| 1.935 | piggyback factor for sack sorters at BMCs | USPS-T-21, Attachment 14, BMCS SSM |
| 1.71 | piggyback factor for sack sorters at non-BMCs | USPS -T-21, Attachment 14, MODS 13 Sacks_M |
| 1.744 | piggyback factor for platform at BMCs | USPS -T-21, Attachment 14, BMCS PLA |
| 1.651 | piggyback factor for platform at non-BMCs | USPS-T-21, Attachment 14, MODS 17 Platfrm |
| 1.542 | piggyback factor for opening units | USPS-T-21, Attachment 14, MODS 17 Oppref |
| 1.602 | piggyback factor for other mail processing - BMCs | USPS-T-21, Attachment 14, BMCS OTHR |

**Attachment M, Table 3**

**Periodicals Mail**
**Calculations of Crossdocking Costs at SCFs**

| Operation | | | (1) Productivity Sacks(Pallets)/hr | | (2) pieces per sack(pallet) | (3) wage rate | (4) Piggy back | (5) premium pay factor | (6) Costs per hr Col3*Col4*Col5 | (7) Pieces per hr Col1*Col2 | (8) costs per piece Col6/Col7 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sacks | Manual | Unload sacks from van to in-house container | 154.1226216 | | 36.44 | $28.24 | 1.651 | 1.01 | $47.10 | 5,616.23 | $0.008386 |
| | | Move APC to outbound dock | 591.5178571 | 1 | 36.44 | $28.24 | 1.651 | 1.01 | $47.10 | 21,554.91 | $0.002185 |
| | | Load sacks to van | 182.5581395 | | 36.44 | $28.24 | 1.651 | 1.01 | $47.10 | 6,652.42 | $0.007080 |
| | Mechanized | Unload sacks to conveyor | 186.9978858 | | 36.44 | $28.24 | 1.651 | 1.01 | $47.10 | 6,814.20 | $0.006912 |
| | | Load sacks to van from extendible conveyor | 182.5581395 | | 36.44 | $28.24 | 1.651 | 1.01 | $47.10 | 6,652.42 | $0.007080 |
| | | Sack sorter | 428.2 | | 36.44 | $28.24 | 1.71 | 1.01 | $48.78 | 15,603.61 | $0.003126 |
| Pallets | Manual | Unload pallets | 12.26215645 | | 3458.67 | $28.24 | 1.651 | 1.01 | $47.10 | 42,410.75 | $0.001111 |
| | | Move pallets to outbound dock | 9.599214286 | | 3458.67 | $28.24 | 1.651 | 1.01 | $47.10 | 33,197.06 | $0.001419 |
| | | Load pallets to van | 13.42494715 | | 3458.67 | $28.24 | 1.651 | 1.01 | $47.10 | 46,432.46 | $0.001014 |

Weighted costs per piece

| Operation | (1) % | | (2) % | (3) % overall Col1*Col2 | (4) Costs per piece | (5) Weighted Costs Per Piece Col3*Col4 |
|---|---|---|---|---|---|---|
| Sacks | 24.71% | Manual | 88.87% | 21.96% | 0.017650593 | $0.003876 |
| | | Mechanized | 11.13% | 2.75% | 0.017117533 | $0.000471 |
| Pallets | 75.29% | Manual | 100% | 75.29% | 0.00354353 | $0.002668 |
| Total | 100% | | | 100% | | $0.007015 |

Weighted costs per pound (2)
$ 0.025618

1. Includes a container conversion factor of 26.5 sacks per IHC from Table 1.
2. Weighted average cost per piece multiplied by Test Year pieces per pound.

**Attachment M, Table 4**

**Periodicals Mail**
**Calculations of Crossdocking Costs at BMCs**

| | | | Percentage of Sack Flow from BMC Sack Sorters | (1) Productivity | | (2) pieces per unit | (3) Wage rates | (4) piggy back | (5) premium | (6) realization | (7) costs per hr | (8) Pieces per hr | (9) Costs per piece |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Col3*Col4*Col5*Col6 | Col1*Col2 | Col7/Col8 |
| Sacks | Manual | Unload sacks to extendible conveyor | N/A | 186.9978858 | | 36.44 | $28.24 | 1.744 | 1.010 | 0.9713 | $48.3223 | 6814.20296 | $0.00709 |
| | | Load sacks to van from extendible conveyor | 73.79% | 182.5581395 | | 36.44 | $28.24 | 1.744 | 1.010 | 0.9713 | $48.3223 | 6652.416805 | $0.00726 |
| | | Load sacks from roller table to IHC | 16.01% | 182.5581395 | | 36.44 | $28.24 | 1.542 | 1.010 | 0.9713 | $42.7253 | 6652.416805 | $0.00642 |
| | | Load containers to van | 16.01% | 414.3763214 | 1 | 36.44 | $28.24 | 1.744 | 1.010 | 0.9713 | $48.3223 | 15099.87315 | $0.00320 |
| | | Load sacks from roller table to IHC | 10.20% | 182.5581395 | | 36.44 | $28.24 | 1.542 | 1.010 | 0.9713 | $42.7253 | 6652.416805 | $0.00642 |
| | | Load sacks to van from IHC | 10.20% | 182.5581395 | | 36.44 | $28.24 | 1.744 | 1.010 | 0.9713 | $48.3223 | 6652.416805 | $0.00726 |
| | | Sack sorter | N/A | 428.2 | | 36.44 | $28.24 | 1.935 | 1.010 | 0.9713 | $53.6145 | 15603.608 | $0.00344 |
| Pallets | Manual | Unload pallets | N/A | 12.26215645 | | 3458.67 | $28.24 | 1.744 | 1.010 | 0.9713 | $48.3223 | 42410.75264 | $0.00114 |
| | | Crossdock pallets | N/A | 7.082452431 | | 3458.67 | $28.24 | 1.602 | 1.010 | 0.9713 | $44.3878 | 24495.86575 | $0.00181 |
| | | Load pallets to van | N/A | 13.42494715 | | 3458.67 | $28.24 | 1.744 | 1.010 | 0.9713 | $48.3223 | 46432.46195 | $0.00104 |

Weighted costs per piece

| | | (1) | | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|---|---|
| Operation | | % | | % | % overall Col1*Col2 | Costs per piece | weighted costs Col3*Col4 |
| Sacks | | 24.71% | unload | 100.00% | 24.71% | 0.007091407 | $0.001752 |
| | | | ext | 73.79% | 18.23% | 0.007263867 | $0.001324 |
| | | | roller | 16.01% | 3.96% | 0.009622703 | $0.000381 |
| | | | roller IHC | 10.20% | 2.52% | 0.013686391 | $0.000345 |
| | | | SSM | 100.00% | 24.71% | 0.00343603 | $0.000849 |
| Pallets | | 75.29% | Manual | 100.00% | 75.29% | 0.00399214 | $0.003006 |
| Total | | 100% | | | | | $0.007657 |

Weighted Costs per pound (2)
0.02796551

1. Includes a container conversion factor of 40 sacks per BMC container from Table 1.
2. Weighted average cost per piece multiplied by Test Year pieces per pound.

**Attachment M, Table 5**
**Periodicals Nonprofit Mail**
**Handling Costs Avoided**

| Facility Type | Cost/Piece | Cost/Pound |
|---|---|---|
| SCF | $0.0070 | $0.0256 |
| BMC | $0.0077 | $0.0280 |
| Total Nontransportation Cost Savings-DSCF Mail | $0.0091 | $0.0331 |
| Total Nontransportation Cost Savings-DDU Mail | $0.0159 | $0.0579 |

[1] Total Nontransportation Cost Savings equals 100% of BMC costs plus 20% of SCF costs.

[2] Total Nontransportation Cost Savings for DDU mail is the cost savings for DSCF mail plus the additional savings from Table 1.